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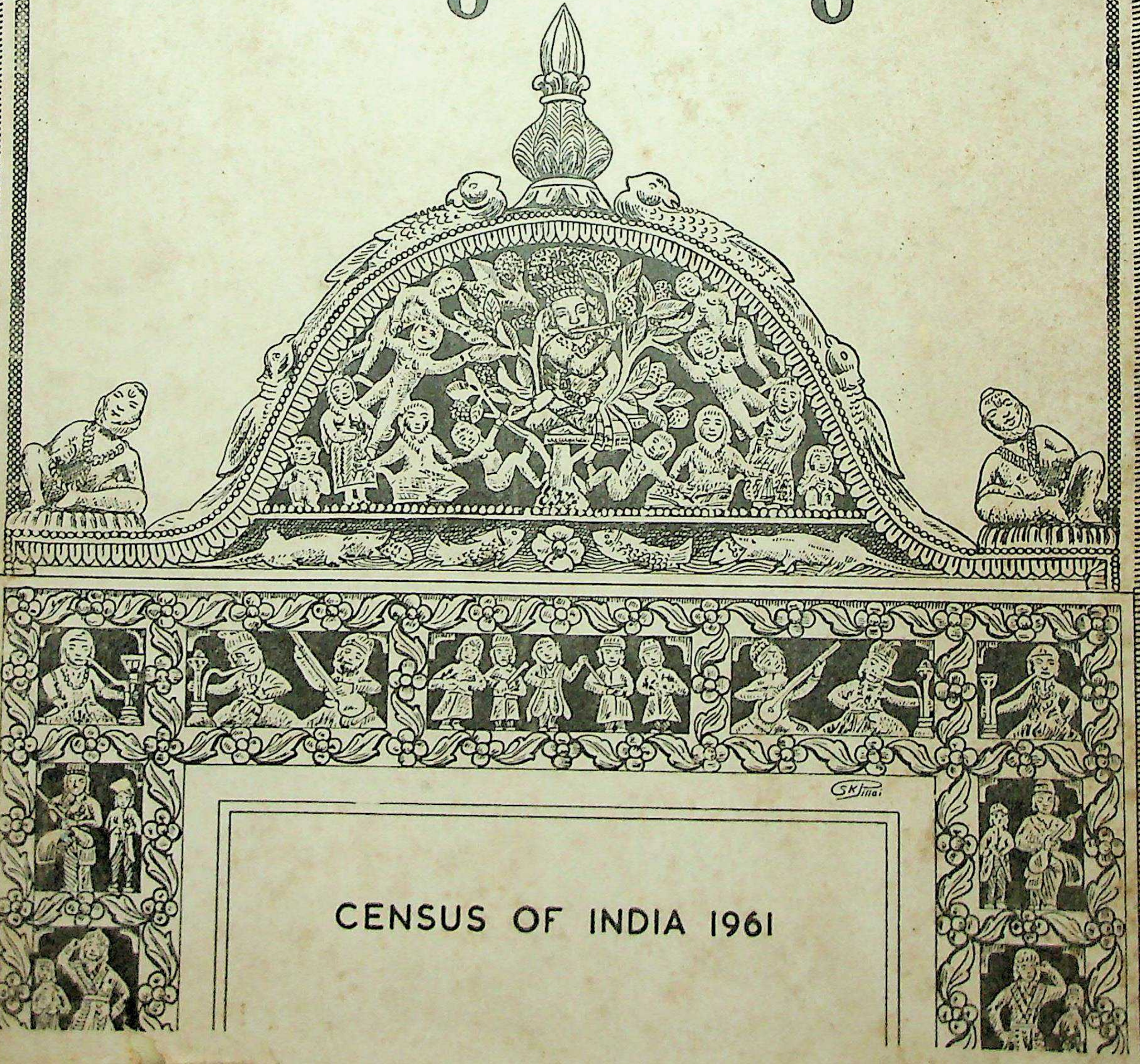
Ivory Works in India
Through the Ages



CENSUS OF INDIA 1961

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VOLUME-I PART VII-A
CRAFT SURVEY MONOGRAPH SERIES (5)

IVORY WORKS IN INDIA THROUGH THE AGES

(UPTO THE END OF 19TH CENTURY)

COMPILATION AND DRAFT..................M.K. PAL, M.A.

RESEARCH DESIGN, SUPERVISION
AND EDITING......................B.K.ROY BURMAN, M.SC., D. Phil.

FOREWORD....................................A. MITRA,
REGISTRAR GENERAL, INDIA.

OFFICE OF THE REGISTRAR GENERAL, INDIA
MINISTRY OF HOME AFFAIRS
NEW DELHI

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FOREWORD

One of the first steps to be taken in the First Five Year Plan was the establishment of six boards for the promotion of handicrafts, village and small industries: 1. The Khadi and Village Industries Board; 2. The All India Handicrafts Board; 3. The All India Handloom Board; 4. The Central Silk Board; 5. The Coir Board; and 6. The Small Industries Board. The rapid expansion of the activities of these Boards which concentrated not only on production and technique, but also on Organisation, extension, credit, marketing and export, consolidated and enlarged the position that the household industries sector had so long enjoyed in the nation's economic life. It was this fact that forced itself upon the preparations for the 1961 Census and demanded that household industry should be separately investigated for a proper accounting of the nation's manpower resources and its specific contribution to the national income. The 1961 Census, therefore, asked as special series of questions on household industry, input of family and hired labour, and the periods over which household industry is conducted. It was felt, however, that an enumeration of the total number of establishments and their industrial classification would be incomplete without a proper description of what they produce and how they produce. It was important to make an assessment of the limits of rigidity within which traditional skill operates. This could be obtained by studying the caste, occupational, social and economic stratifications, the limitations of credit and marketing facilities, the dominance of custom over contract, the persistence or traditional tools and design forms, the physical limitations of transport, communication and mobility, the inability to adopt new lines or adapt to changing circumstances.

Mrs. Ruth Reeves, author of Cire Perdue Casting in India, was associated with this project from its inception in 1959. In fact, it was she who exhorted the Registrar General, in 1958 to undertake and extend the limited task which he, as Census Superintendent for West Bengal in 1951, had completed in 1953. Her association and selflessness, had been one of the prime movers in the Craft Survey Project and I take this occasion to pay homage not only to her great work, but to the great debt under which she held us since 1958 till the moment of her death in New Delhi in December, 1966.

For co-ordinating the various special studies including the craft surveys, the Handicrafts and Social Studies Section in the Office of the Registrar General of India, was set up in 1961 with Dr. B. K. Roy Burman as the head. The section has been responsible for training up an army of Investigators in the Centre as well as in the States in the habit of looking for and recording the exact process on strict standard of precision, objectivity and rectitude. Besides, this Section assisted each State with a thorough scrutiny of each draft Craft Survey and with many suggestions for technical improvement of contents and presentation. This Section evolved an extended questionnaire and a model analytical chart of scrutiny which were extremely useful for the craft studies.

The extended questionnaire referred to above was the end-product of a process which was started earlier. During 1960 and the first half of 1961, several States had made explorative studies to find out how the enquiries should be made. It was felt desirable that empirical analytical studies based on a structured questionnaire should replace general descriptive accounts that had obtained so far. The primary aim was to obtain a picture as much of the artisan himself as of his craft, to obtain a perspective of the artisan and his craft in his social and economic setting, the extent to which tradition bound him and the winds of change ruffled him, the extent of his mobility and immobility, the conditions of market, credit, new contacts and designs in which he operated, the frame of new as well as traditional producer-customer relationships in which he still worked and how far he was ready to pierce his own caste-tribe socio-economic cocoon and make a break through to new opportunities promised by the Five Year Plans. The aim was to hold up the mirror to hereditary skills struggling with the dialectics of tradition and change. With the above objective, in view, the first part of the questionnaire, purporting to be a village schedule, sought to take account of the size and population of the village, its remoteness from or proximity to centres of trade and commerce, in short, the degree of isolation in which the artisan worked, and the relative strengths of various communities in the village which would afford clues to social inter-dependence and the prevalence of the *jajmani* system. The second part was devoted to artisan communities in the village; the several castes of artisans, the number of families in each, the total number of workers, males and females, the extent of co-operative activity among them, the extent of dependence upon employers and of wage or contract labour. There were other questions on the exchange of flow of designs, the use of colours, the ancientness of the craft and legends associated, the colonization of the craftsman, on patrons and customers and on social and economic contact with the world inside and outside the village. There were specific questions on the workshop itself and particularly the tools and the source of supply of these tools, because it was felt that tools decide everything and are the surest index of inertness or flexibility. Separate blocks of questions were designed to bring out the ramifications of artisan castes throughout the country and the ways they sustained themselves, the type of clientele they catered for, the extent to which they operated on money or barter or service, how specialised their craft was, how wide the market, how dependent they were on their socially preordained clientele and how restricted the latter was by the seemingly unalterable laws of social custom; the extent to which they could operate in the open market, the range of their wares and the sizes to which these were ordinarily restricted either by the limits of their own skill or the length of their customer's purse strings. Inquiries were to be made about the operation of middlemen and of co-operative societies, the people who gave new designs and demanded new products. Finally the several stages of production of the articles themselves were to be fully described including the final and finishing stage and a list of very skilled craftsmen of each community was to be furnished. The third part was devoted specially to tribal communities and designed to find out how self-sufficient or dependent they were on the production and supply of manufactured goods, the extent to which they produced themselves or depended on others, their contacts with other communities and the specific forms of production and commerce through which these contacts were maintained.

In the course of the survey work, it was found that many of the questions required to be further spelled out so that the investigators would know exactly how to collect the particulars in respect of the various items. The enlarged schedule was mainly the outcome of this realisation. Some new dimensions were also added to it. For instance, there were separate sections for practising and non-practising artisan families, co-operative societies, production-*cum*-training centres, consumers preference, and so on. Several Census Superintendents adopted this enlarged schedule for the surveys carried out by them. The Handicrafts and Social Studies Section also took up a number of crafts for special studies on the basis of the enlarged schedule.

Along with the special field investigations the Handicrafts and Social Studies Section undertook a few ancillary studies which include:

1. Preparation of directories of craft centres throughout the country for various crafts.
2. Techno-historical study relating to selected crafts showing their distribution over space and time beginning from the earliest period to the modern time.
3. Preparation of bibliography on handicrafts of India.
4. Collaboration with National Library in preparation of a bibliography on small scale and cottage industries and handicrafts of India.

5. Building up a Photo-Library depicting various crafts and other aspects of Indian life. A collection of about 3,000 photos, which was given to the office of the Registrar General, India, by Mrs. Ruth Reeves constituted the nucleus of the library; in course of time the Handicrafts and Social Studies Section has collected about 20,000 photos, and has indexed, classified and categorised them.

The present study on Ivory Works in India Through the Ages, commenced in 1964. The compilation of the data was made by Shri M. K. Pal, under the guidance of Dr. B. K. Roy Burman. I avail myself of this opportunity to express my appreciation of the work done by my colleagues in connection with this project.

NEW DELHI:
December 19, 1967

A. MITRA,
Registrar General, India.

PREFACE

The Census Organisation has taken up the investigation of a large number of traditional crafts throughout India. During the course of these investigations, it was found that many of the crafts have their roots going back to the hoary past and that to have a proper understanding of the present traits of the craft—its organisation, social base and technology, one must have understanding of the vicissitudes of changes that it has gone through from time to time. It is this realisation, that stimulated the Handicrafts and Social Studies Unit of the Office of the Registrar General, India to take up the project of studying a few crafts in their historical depth. Ivory works in India is one of them.

The basic data for the study was mainly compiled by Shri M. K. Pal. The frame for analysis of the same was provided by myself. The responsibility for the interpretation of the data also pertains to me. I am grateful to Shri Pal for the devotion with which he has compiled the data from various sources.

The illustrations included in this monograph were obtained from the following sources:—

1. Archaeological Survey of India, New Delhi.
2. Asutosh Museum of Indian Art, University of Calcutta.
3. Arthur Probsthain, Oriental Bookseller, Gt. Russell St., London.
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12. Prince of Wales Museum of Western India, Bombay.
13. Sri Ramling Khandappa Lamture, Thair, Tq. and Distt. Osmanabad, Maharashtra.
14. Seattle Art Museum, U.S.A.
15. Victoria and Albert Museum, South Kensington, London.

I am grateful to the authorities of the above institutions as well as to Sri Lamture for giving permission to us to reproduce the illustrations.

I avail of this opportunity to thank the Director General of Archaeology, Indi and his colleagues for extending their co-operation to the project.

Dr. Niharranjan Ray, Director, Indian Institute of Advanced Studies, Simla and Dr. D. P. Ghosh, Officer-in-charge, Asutosh Museum of Indian Art, Calcutta University could find time to go through the manuscript and give their valuable comments. I am grateful to them for the same.

I avail of this opportunity to express my gratitude to Shri A. Chandra Sekhar, Additional Registrar General and Shri A. Mitra, Registrar General, India, for their encouragement to the Craft Studies in general, and to this project in particular.

B. K. ROY BURMAN

ACKNOWLEDGEMENTS

We are indebted to the following institutions and individuals for the illustrations which have been reproduced in the present monograph.

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7. **Musie du Louvre, Paris :**
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11. **Prince of Wales Museum of Western India, Bombay:**
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12. **Seattle Art Museum, U.S.A:**
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S/Shri D. R. Kapoor, P. K. Jain and Bhagwat Sahi of the Library of the Archaeological Survey of India, who rendered unstinted co-operation in connection with the present study deserve special thanks. Other members of the Staff of the Library and the Photo Section of the Archaeological Survey of India, have also placed us in great debt.

CHAPTER I

INTRODUCTION

Ivory work is a very ancient craft in India. It is also a modern craft of great charm. Evidences of its existence are found in Harappan Culture sites (*Circa* 2500-1500 B.C.) of Western and North-Western India. From the fine workmanship of the specimens found at Mohenjodara (Early Harappan Period), it can be presumed that even in the Pre-Harappan Culture stage, the craft may have flourished in the region. Definite evidences of the same are, however, lacking.

A statement giving the particulars of the ivory objects found at different sites in different periods up to the end of 19th century is furnished in *Appendix I.* Here an analysis would be made of the pattern of distribution of the ivory objects through space and time in India.

Period and centres where evidences of ivory objects have been found or reported to be in existence.

Serial number of the period	Period	Centre
1	2	3
I	Harappan	Mohenjodaro, Harappa, Lothal and Kalibangan.
II	Post-Harappan	Chirand and *Pandu-Rajar-Di-hbi.*
III	7th cent. B.C. to 3rd cent. B.C.	Rupar, *Kapilavastu*, Prabhaspatan, Nagda, Ujjain, Taxila, Nagal, Chandraketugarh, Banares, Awra, Kayatha and Sonepur.
IV	2nd cent. B.C. to 3rd cent. A.D.	Taxila, Nagda, Prabhaspatan, Ter, Ujjain, Malwa, Nagal, Rajghat, Pataliputra, Kondapur, Arikamedu, Pragjyotish, Sankaran, Chandraketugarh, Begram, Dharanikota, Nevasa, Nagari, Dasarna, Vidisa, Ayodhya, Mysore and *Dantapura.*
V	4th cent. A.D. to 750 A.D.	Kashmir, Assam, Chandraketugarh, Masaon and Maheth.
VI	751 A.D. to 1100 A.D.	Rupar, Indragarh, Hastinapur, Dwaraka, Kashmir, Bengal, Bihar and Orissa.
VII	1101 A.D. to 1500 A.D.	Hastinapur, Orissa, Cambay and Dwaraka.
VIII	1501 A.D. to 1800 A.D.	Pataliputra, Travancore, Goa' Karnatak region, Lucknow or Banares, South India, Vijaynagar, Orissa, Bijapur, Jaipur, Mysore, Udaipur, Bikaner, Surat, Darbhanga, Multan, Kashmir, Cambay, Tatta and Bombay.
IX	1801 A.D. to 1900 A.D.	Poona, Sattara, Tirupati, Godavari, Broach, Surat, Udaipur, Junagarh, Bhuj, Amritsar, Mahuva, Sylhet, Kumta, Banvasi, Siddapur, Bilgi, Sehwan Town, Delhi, Rajputana, Jaipur, Ajmirmarwara, Alwar, Bikanir, Pali, Rewa, Ratlam, Dhar, Alipura, Berhampur, Mothra, Daulatbazar, Ranshagorgram, Hill Tippera, Chittagong, Dacca, Calcutta, Panga, Kakinia, Barabari, Balasore, Monghyr, Patna, Darbhanga, Baroda, Kutch, Halla, Kathiawar, Travancore, Mysore, Vizagapatam, Ludhiana, Patiala, Multan, Deraghazikhan, Gujran-wala, Hoshiarpur, Lahore, Sialkot, Bhera, Indor, Kanpore, Benaras and Trichinopoly.

It is to be noted from the above statement that there is both continuity and discontinuity of the craft at individual sites. The evidences of the existence of ivory objects are found at 32 sites for one period, 18 sites for two periods, 5 sites for three periods and only one site for four periods.

It is, however, to be noted that the sites where the evidences of ivory objects are found for more than one period do not always provide the evidences for successive periods. In quite a good number of sites, the evidences of ivory objects are found in early period, then for some successive periods no evidences are available and again at a much later period, evidences of the craft come up. Particulars of the sites where ivory objects have been found in more than one period are furnished below:

Site	Periods for which evidences of ivory objects are found.
1	2
Rupar	III & VI
Prabhaspatan	III & IV

Site	Periods for which evidences of ivory objects are found.
1	2
Nagda	III & IV
Ujjain	III & IV
Taxila	III & IV
Nagal	III & IV
Chandraketugarh	III, IV & V
Benaras	III, VIII & IX
Pataliputra (Patna)	IV, VIII & IX
Pragjyotish (Assam)	IV & V
Mysore	IV, VIII & IX
Kashmir	V, VI & VIII
Masaon	IV & V
Hastinapur	VI & VII
Orissa	VI, VII, VIII & IX
Cambay	VII & VIII
Dwaraka	VI & VII
Travancore	VIII & IX
Jaipur	VIII & IX
Udaipur	VIII & IX
Bikaner	VIII & IX
Surat	VIII & IX
Darbhanga	VIII & IX
Multan	VIII & IX

It is found from the above, that there is no continuity of the craft at the centres of Harappan and Post-Harappan periods. In seven out of the ten sites of the third period (seventh century B.C. to third century B.C.) where actual ivory object was found, there is continuity in the next period as well (second century B.C. to third century A.D.). One site, namely Rupar, where there is no continuity in the next period, there is reappearance of the craft in a much later time, namely sixth period (751 A.D. to 1100 A.D.). In another site, namely Benaras, where evidence of the continuity of the craft during the fourth period is not found, the craft re-appears during the eighth period (1501 to 1800 A.D.). It has later on continued during the ninth period (19th century) as well. In one site, namely Chandraketugarh the craft has not only continued during the fourth period—first appearing during the third period, but has also continued during the fifth period, namely, fourth century A.D. to 750 A.D.

During the fourth period ivory objects have been found in 18 sites. Out of them in 11 sites, the craft appears for the first time in this period and in six sites there is continuation of the craft from the third period. In one out of the 18 sites of this period, there is continuity to the next period. Evidences of the existence of ivory craft during the fifth period (4th century A.D. to 750 A.D.) are available in respect of two regions (without indication of exact sites) and three sites in other regions. The two regions for which evidences are available are Kashmir and Assam. There is one site, namely Mysore, where the craft appears for the first time during the fourth period and then seems to have gone out of existence for a long time. It reappears during the eighth period (1501 A.D. to 1800 A.D.) and has continued later on as well. During the sixth period (751 A.D. to 1100 A.D.) examples of the craft have been found at four sites. The evidences of its existence have also been found in three regions namely Kashmir, Bengal, Bihar-Orissa. Out of these sites and regions, as already mentioned, in one site namely Rupar the craft was found first during the third period. With a lapse during the fourth and fifth periods, it reappears during the sixth period. In one region, namely Kashmir, the craft first appeared during the fifth period. It continues during the sixth period and then with a lapse during the seventh period it reappears during the eighth period. In three sites and regions namely Hastinapur, Dwaraka and Bihar-Orissa, the craft appeared for the first time during this period and has continued during the next period as well. In Bihar-Orissa region, it has continued even afterwards. Evidences of the existence of the craft during the seventh period (1101 A.D. to 1500 A.D.) have been found only in three sites, *viz.*, Hastinapur, Cambay and Dwaraka. Without specific information about any particular site, its evidence has also been found in Orissa region. Out of the three sites of this period, for one site, namely Cambay only literary evidence about the existence of the craft is available. No actual specimen is, however, available. It is to be noted that in this site evidence of the craft comes up for the first time during this period. During the next period also evidence of its existence is available. At Hastinapur and Dwaraka after this period, there is no evidence of the existence of the craft. During the eighth period (1501 A.D. to 1800 A.D.) evidences about the existence of the craft have been found at or reported from 15 sites. Besides, one specimen has been found for this period whose actual site is not known; it may be either from Lucknow or from Benaras. Evidences of its existence during this period have also been reported from Kashmir, Orissa, Karnatak region and South India. Out of the above 15 sites and four regions in 3 sites and two regions the craft existed in earlier periods also. As mentioned earlier, at Benaras, the craft first appeared during the third period. Then after a lapse of about 1600 years it reappears during this period. Thereafter it has continued to exist there. At Pataliputra; the craft first appeared during the fourth period. Here also there was a lapse of about 1200 years before the craft reappears during this period. A similar position is found at Mysore. In Kashmir region, the craft existed during the fifth and sixth periods. There is no evidence of its existence during the seventh period. During the eighth period again, its evidences are available. In the remaining sites the craft appears for the first time during this period. Out of them, in seven sites namely Travancore, Jaipur, Udaipur, Bikaner, Surat, Multan and Darbhanga the craft continued even during the later period. In the 19th century, the craft is found to be practised in 66 centres, out of which in nine centres it existed from before and in 57 centres it appears for the first time.

Summing up, it is to be noted that during 1101 A.D. to 1500 A.D., the craft appears to have suffered a setback. There are only a few centres where evidences about the existence of the craft are found and there is only one centre where the craft appears for the first time during the period. From 16th century onwards the craft seems to have gained in vigour. It reappears in a few centres where it existed about twenty centuries ago and then had lapsed. It also appears for the first time in quite a good number of centres. During the 19th century, however, it appears that there was a sudden proliferation of craft centres on an unprecedented scale. The social and cultural factors responsible for the vicissitudes of change in the fortune of craft during the different periods would be examined later on. In the meantime, some more aspects of the pattern of distribution of the craft through time and space would be examined.

CHAPTER II

NUMBER OF CENTRES WHERE IVORY OBJECTS COULD BE EXPECTED TO BE FOUND IN DIFFERENT PERIODS AND NUMBER OF CENTRES WHERE IVORY OBJECTS ARE KNOWN TO HAVE ACTUALLY EXISTED

For different periods and different regions of India if the number of sites where ivory objects have been found or reported is examined with reference to the number of known and excavated sites, it gives an idea about the prevalence of the craft in those periods and regions.

For the purpose of the above enquiry, India has been divided into the following regions:

1. *North-Western region*

This region not only includes the areas now situated in the north-western region of India, but also the areas which were in India during the British period and which are now in West Pakistan. Thus this region covers West Pakistan, Punjab, Rajasthan, Delhi, Himachal Pradesh, Meerut and Kumaun divisions of Uttar Pradesh.

2. *Northern region*

This region includes Uttar Pradesh (excluding Meerut and Kumaun divisions) and Bihar.

3. *Western region*

This region includes Gujarat, Maharashtra and Goa, Daman and Diu.

4. *Central region*

This region includes Madhya Pradesh.

5. *Southern region*

This region includes Andhra, Madras, Mysore, Kerala and Pondicherry.

6. *Eastern region*

This region includes Orissa, West Bengal, Assam, Manipur, Tripura, Nagaland, N.E.F.A. and East Pakistan.

As no evidence of ivory craft has been found in Laccadive and Minicoy Islands and Andaman and Nicobar Islands, the same have not been included in any of the regions for the purpose of the present study.

Each excavated and explored site belonging to a particular period is counted as a potential centre where ivory objects could have been found during that period. Besides, another category of places is taken into consideration as potential craft centres. From literary sources like Kautilya's *Arthasastra*, Vatsyayana's *Kamasutra*, *Mahavastu*, other Buddhist literature, *Ramayana*, *Mahabharata*, Banabhatta's *Harsacharita* and historical writings of Muslim period, names of capitals of various kingdoms, *Mahajanapadas*, headquarters of feudatory chiefs, cities, towns and trade centres are available. Ivory being a deluxe craft, it is presumed that if it flourished in a region in a particular period, its evidences would be found in the above places.

A statement giving the particulars of the sites which have been excavated or explored in different periods or which satisfy the other criteria indicated above and the centres where existence of ivory craft has been found or reported in different periods is furnished in *Appendix II*. The particulars available in the above statement are summarised below:—

Period I (Harappan)

Twelve Harappan Culture sites have been excavated in Indian Sub-continent, out of which seven are situated in North-western region and five are in Western region. Ivory objects have, however, been found only in four sites, out of which three are in North-western region and one is in Western region.

Period II (Post-Harappan)

Thirty-nine Post-Harappan sites have been excavated in different regions of India. The distribution of the sites excavated and the sites where ivory objects have been found is as follows:

North-Western region		Northern region		Western region		Central region		Southern region		Eastern region		Total	
A	B	A	B	A	B	A	B	A	B	A	B	A	B
1	2	3	4	5	6	7	8	9	10	11	12	13	14
12	—	1	1	12	—	9	—	4	—	1	1	39	2

A—Total sites excavated.

B—Sites where evidences of ivory objects have been found.

It is found from the preceding statement, that North-western and Central regions are the most important regions for the Post-Harappan culture. In none of these regions ivory objects or other evidences of ivory craft have been found. Southern region is also of some importance for Post-Harappan culture. Even in this region, no evidence of ivory craft is available. Northern region and Eastern region are much less important for Post-Harappan culture. Only one site each has been excavated in each of these regions. These sites are Chirand in Saran district of Bihar and *Pandu-rajar-Dhibi* in Burdwan district of West Bengal. It is interesting to note that in both of these sites evidences of ivory craft have been found.

There are also other evidences of the existence of the craft during this period. There is a passage in the *Aitareya Brahmana,* which reads as follows: "They recite the *Silpas.* These are the works of art of the gods (*devasilpanyateshan*); in imitation of these works of art, here is a work of art accomplished, an elephant (*hastin*), a goblet (*Kamso*), a garment (*vasah*), a gold object (*hiranyam*), a mule chariot (*asvatari rathah*), a work of art is acomplished in him who knows thus[1]. Dr. Moti Chandra has interpreted that *hastisilpa* in this passage refers to ivory carving, which was no ordinary art, but an art of the gods.[2] Though the passage does not mention any site or region, it may be taken, to refer to the Northern region of India, in a general way.

Period III (7th century B.C. to 3rd century B. C.)

Sixty-seven sites of this period have been excavated in different parts of India. Out of these 67 sites, in 10 sites evidences of ivory craft have been found. Besides, for 2 sites existence of ivory craft has been reported. Region-wise breakup of the sites excavated and the sites where ivory objects have been found or reported is furnished below:

North-western region		Northern region		Western region		Central region		Southern region		Eastern region		Total	
A	B	A	B	A	B	A	B	A	B	A	B	A	B
1	2	3	4	5	6	7	8	9	10	11	12	13	14
13	2	16	1(2)	9	2	9	4	16	—	4	1	67	10(2)

A = Total sites excavated.

B = Sites where evidences of ivory objects have been found.

Figures within bracket show the number of sites where objects have not been found, but for which references are available in literary sources.

The statement shows that during 7th century B.C. to 3rd century B.C., 13 sites were excavated in North Western India, but out of them only in two sites, Rupar and Taxila, evidences of ivory craft have been found. In Northern India, out of 16 excavated sites, only in one site, Sonepur in Bihar, actual evidence of the craft has been found. In Western India out of 9 excavated sites only in two sites Prabhaspatan and Nagal, ivory objects have been found. In Central India, out of 9 excavated sites in four sites ivory objects have been found. These four sites include Ujjain in respect of which literary references are also available. In the *Guttila Jataka* it is mentioned that the ivory merchants of Benaras were moving to Ujjain. In Eastern India, out of 4 excavated sites only in one site, Chandraketugarh, ivory objects have been found. In Southern India no ivory object has been found in any of the 16 excavated sites of this period.

As noted earlier on the basis of literary references, it is estimated that there were 102 capitals of kingdoms, *Mahajanapadas,* cities and towns in the different regions of India in this period. Out of the above 25 centres were in North-western region; 29 were in Northern, 15 were in Western region, 11 were in Central region and 14 were in Southern region, and 8 were in Eastern region. But out of the total 102 potential centres only in respect of three centres, Benaras, Ujjain and *Kapilavastu,* evidences of the existence of ivory craft are available in early literary sources like the *Mahavastu* and other *Jataka* stories. These literary sources also give an enchanting picture of the craft in Northern region in general during this period. In the early *Vinaya* texts needle-cases made of ivory are mentioned.[3] Sword handles (*satthakadanda*) and ear-cleaners (*Karnamalaharini*) of ivory are said to be lawful to Budhist monks.[4] It is said in the *Silavanaga Jataka*[5] that a forester, tempted by the ivory of *Silavanaga* visited the ivory workers' bazzar at Benares where ivory was being worked in diverse forms and shapes. The *Mahavastu*[6] in its list of the guilds at *Kapilavastu,* mentions conch-shell-cutters (*Sankhika*) and ivory-carvers (*dantakara*). There was a master craftsman working both in conch-shell and ivory (*sankhavalavakaramahattaraka*) who made ornaments and other objects from them (*gajadantasankhamayam*).[7] He made ivory bangles (*nagadantavalaya*), collyrium sticks (*anjaniva*); ivory caskets (*dantasamudgaka*), unguent pots effecting fantastic genii forms (*rochana-pisachika*), ivory ewers (*dantabhringaraka*), ivory bed legs (*dantapadamaya*), and lions (*simhaka*), which word may also denote lion-shaped bed legs. Beds made of ivory are also mentioned.[1] The *Divyavadana*[2] mentions ivory seals which were apparently used in a case of emergency. The Buddhist Sanskrit *Vinaya*[3] relates the story of a master ivory carver (*dantakala-charya*) who went to the land of the Yavanas with a measure of "ivory rice" (*dantatandula*), and appeared at the house of a master artist. As the latter was away from his house, the ivory craftsman asked his wife to cook the "rice" and departed. She tried hard to boil it but failed. Dr. Moti Chandra has interpreted that the story indicates the visit of Indian ivory carvers to Alexandria. Jaina Cannonical literature also yields interesting information. The *Prajnapana Sutra* at one place classifies the ivory carvers (*dantakara*) among noble professions (*Silparya*).[4] The *Arthasastra* of Kautilya[5] also informs that the Mauryas kept forest reserve for the supply of elephants and if anybody was caught poaching, the penalty was death. However, those who brought the tusks of dead elephants were rewarded. Another casual information obtained from the same source is that sword handles were made from ivory. The *Kamasutra* of Vatsyayana[6] also refers occasionally to ivory carvings. Ear-rings made of ivory were so much in demand that Vatsyayana includes the making of ivory ear-rings (*karnapatrabhanga*) in his list of sixty-four arts. The commentator explains *Karnapatra-bhanga* as an article of ornament made of ivory, etc. Dolls (*duhitrika*) were also made of ivory (*gajadanta*).[7]

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[1] A.B. Keith, *Aitareya Brahmana,* Harvard University Press, 1920, VI, 27.

[2] Dr. Moti Chandra, "Ancient Indian Ivories", Prince of Wales Museum Bulletin, No. 6, 1957-1959, p. 4ff.

[3] *Bhikku Patimokkha* V. 86; *Bhikkuni Patimokkha* IV. 12. See also "Ancient Indian Ivories"—by Dr. Moti Chandra, Prince of Wales Museum Bulletin, No. 6, 1957-59, p. 70.

[4] *Chullavagga* V. 1.12; *ibid,* V. 3.7.

[5] No. 72-F.B. Cowell (editor), The *Jatakas,* Vol. I, London, 1956 pp. 175-176. See also Dr. Moti Chandra, *op.cit.* p. 7.

[6] *Mahavastu,* III, 113, Sl. 6-11.

[7] *Ibid,* II, 473.

Period IV (2nd century B.C. to 3rd century A.D.)

Ninety-four sites of this period have been explored or excavated in different parts of India. Out of these 94 sites, in 18 sites evidences of ivory craft have been found. Besides, for six sites, existence of ivory craft has been reported. Region-wise breakup of the sites excavated or explored and the sites where ivory objects have been found or reported is furnished below:—

Name of the region	A	B
1	2	3
North-Western · · · · ·	16	3
Northern · · · · ·	22	3(1)
Western · · · · · · ·	14	4
Central · · · · · · ·	12	3(2)
Southern · · · · · · ·	22	4(1)
Eastern · · · · · · ·	8	1(2)
TOTAL	94	18(6)

A = Total sites explored or excavated.

B = Sites where evidences of ivory objects have been found.

Figures within brackets show the number of sites where objects have not been found, but for which references are available in literary sources.

The statement shows that during 2nd century B.C. to 3rd century A.D. in north-western region, 16 sites were explored or excavated, but out of them, only in three sites, evidences of the existence of ivory objects have been found. In northern region, 22 sites were explored or excavated out of which in three sites evidences of ivory craft have been found. In addition, in one site, namely Ayodhya, though no actual object was found, literary evidences show that ivory craft flourished there in this period. In western region, 14 sites were explored or excavated, out of which in four sites ivory objects have been found. In central India, 12 sites were explored or excavated, out of which in three sites evidences of ivory craft have been found. In addition, in respect of two sites namely Dasarna (Eastern Malwa) and Vidisa (Bhilsa), modern Besnagar, evidences about the presence of the craft are available though no actual object has been found. In Southern region, 22 sites were explored or excavated, out of which in four sites evidences of the existence of ivory craft have been found. Besides, in respect of one site namely Mysore, evidences about the presence of the craft are also available in literary sources. In Eastern India, eight sites were explored or excavated out of which in one site evidences of the presence of the craft have been found. In addition, there are two areas, namely, *Dantapura* (Dantan in Midnapur district, West Bengal) and Assam in respect of which literary evidences about the presence of the craft are available though no actual object was found. The list of presents from Bhaskar Varman of Assam to Harsavardhan as furnished by Banabhatta includes among other jewelleries and ornaments, rings of ivory.

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[1] *Ibid*, II, 420. See also Dr. Moti Chandra's article in Prince of Wales Museum Bulletin, No. 6, p. 8.

[2] *Divyavadana*, E.B. Cowell (editor) Cambridge 1896 p. 410.

[3] Gilgit Mss., Vol. III, Part I, p. 171; See also Dr. Moti Chandra, *op.cit.* p. 8.

[4] The *Prajnapana Sutra*, Bhagwandas Harshachand (translator), 1934, I. 70.

[5] The *Arthasastra* of Kautilya—R. Shamasastry (Translator) Mysore, 1923, p. 53. See also Dr. Moti Chandra, *op. cit.* p. 11.

[6] *Kamasutra* of Vatsyayana—edited by Damodara Sastri, Benaras, 1929, I.3.16.

[7] *Ibid*, III 3.13. See also Dr. Moti Chandra, *op.cit.* p. 9.

The list of political centres and important commercial, trading and cultural centres of this period that has been prepared by this organisation covers 64 sites. Their breakup in the different regions is as follows:

Name of the region	X	Y
North-Western India	10	1
Northern India	9	1(1)
Western India	17	2
Central India	9	2(1)
Southern India	14	—
Eastern India	5	—(1)
TOTAL .	64	6(3)

X= Potential Centres.

Y= Centres where evidences of ivory objects have been found.

Figures within brackets show the number of sites where objects have not been found, but for which references are available in literary sources.

Out of the 10 sites in North-Western India, in one site, namely Taxila, ivory objects have been found. In one of the nine sites in Northern India as well ivory objects have been found. Besides, literary references show that ivory craft flourished in another site. Out of the 17 sites in Western India in two sites ivory objects have been found. Out of the nine sites in Central India, in two sites evidences about the existence of the ivory craft have been found and in respect of another site literary evidences about the existence of ivory craft are available. In none of the 14 sites in Southern India evidence about the existence of ivory craft is available. In one site out of the five in Eastern India, evidences of the existence of ivory craft are available.

Descriptions of these objects actually found in the different sites of this period, have been furnished in the general table. Particulars available in the published sources are furnished here. The descriptions in the great epics of India, the *Ramayana* and the *Mahabharata*, which are dated to this period, show that the profession of ivory carvers was well organised and developed. Among a large number of guilds mentioned in the *Ramayana*,[1] appear the ivory carvers (*dantakarah*) and ivory dealers (*dantapajivinah*). Apparently two guilds came into existence centering the craft. one was that of carvers, the other was that of dealers or those who hunted elephants for ivory. The *Mahabharata* describes the swords with handles and also the chairs made of ivory, which were presented by the ruler of Assam to Yudhisthira at the time of *Rajasuya Yajna*..[2] The last *sloka* of chapter 231 of *Haribamsa*, has during the course of description of the court of Hiranyakashipu, stated that "the beautiful windows of that place are built of ivory". In the Greek and Latin literatures also of this period, there are references about the ivory objects of India. Virgil has made a mention of the Indian ivory objects and has praised their purity of colour.[3]

Period V (4th century A. D. to 750 A. D.):

Forty-five sites of this period have been explored or excavated. Out of these 45, in four sites ivory objects have been found. Besides, in respect of one site, literary evidences about the existence of the craft are available. A statement showing the region-wise breakup of the sites explored or excavated and the sites where ivory objects have been reported to be in existence is furnished below:

Name of the region	A	B
North-Western India	5	1
Northern India	14	2
Western India	8	—
Central India	7	—
Southern India	4	—
Eastern India	7	1(1)
TOTAL .	45	4(1)

A= Total sites explored or excavated.

B= Sites where evidences of ivory objects have been found.

Figures within brackets show the number of sites where objects have not been found, but for which references are available in literary sources.

It is obvious from the above statement that during this period use of ivory diminished very much as compared to the earlier periods. Further idea about the comparative scarcity of ivory objects in this period can be obtained, if the potential find-spots like capitals

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[1] *Ramayana*, II, 94, 13.

[2] *Mahabharata* II, 47, 14; See also Dr. Moti Chandra. *op. cit.*, pp. 4-5.

[3] Georgici, 57 ; Aenis XII

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of kingdoms, administrative headquarters up to provincial level and important commercial and trading centres are taken into consideration. A statement giving the number of the centres of the above categories and the centres where ivory objects have been found or reported is furnished below:

Name of the region	X	Y
North-Western India	36	1
Northern India	19	—
Western India	22	—
Central India	17	—
Southern India	28	—
Eastern India	14	—
TOTAL .	136	1

X = Potential centres.

Y = Centres where evidences of ivory objects have been found.

Figures within brackets show the number of sites where objects have not been found, but for which references are available in literary sources.

The above statement shows that out of the 136 centres only in respect of one centre evidences of the existence of ivory crafts are available.

Contemporary literary sources, however, furnish interesting details of the craft, without indicating specific sites. There is a reference in the *Brihatsamhita* of Varahamihira, which indicates that beds with ornamental ivory inlay work commended admiration.[1] In Chapter 79 of the book it is further stated as follows:—"Good ivory should be used for purposes of decoration, and for this purpose a length of twice the circumstance of the root, from the tapering end of the tusk, should be taken. A greater length may be taken from the tusks of the elephant living in marshy jungles, and a smaller length should be taken from the tusks of the elephant bred in the hills"[2]. In the *Manasara* also there is reference about the ivory work. For instance, it enjoins that couches should be decorated with lotus-petal carvings (*padmapatradichitraischa*) and other ornaments. These should be further provided with low railings (*Kshudravedika*) and floral knobs made of ivory (*dantajam*) or wood.[3] The *Angavijja* (4th-5th century A.D.) refers to ornaments made from ivory (*dantamayam*). It further indicates that implements and objects of art were also made of ivory. The text also mentions in the list of seats (*asana*) one made of ivory (*dantasana*) and speaks of a palace apartment decorated with ivory inlay work (*dantagiha*).[4] In the 16th *sloka* of Chapter VI of Kalidasa's *Raghuvamsam* and in the 60th *sloka* of Chapter I of *Magh*, ivory ear-rings and other ornaments are also mentioned. In the 7th century A.D. Bana minutely observed about certain aspects of ivory carving. While describing the Devi's temple in the Vindhyas he has used the word *danta-kapata* in the compound *Vanadviradadantakapatena parivritam*.[5] This word has been translated by scholars as ivory door. In the *Kadambari* and the *Harshacharita* he has mentioned the manifold use of ivory. For instance, it was used for decorating architectural elements and for making ornaments and caskets. At one place, he has made a mention of gargoyle made of ivory which was carved in the shape of a *makara* (*dantamayamakaramukhamahapranala*)[6]. Bana also refers to ivory casket under the term *dantasapharuka*. In the *Harshacharita* he described how during the birth ceremonies of Harsha, attendants carried small ivory caskets containing arecanuts whitened with sandal paste and the filaments of catechu perfumed with mango oil.[7] Another author of this period has not forgotten to make a mention of ivory works. Sudraka (Gupta Period) in act IV of the *Mrichchhakatika* refers to a lofty ivory *torana* (*dantidantatorana*) in the house of Vasantasena. Similar mention may also be found in Bana's *Harshacharita* where it has been stated that the private apartment had columns inlaid with ivory, and the *Vajramandira* was provided with an ivory *torana* (*sadantatoranavajramandira*).[8] Kshemendra (Gupta period) in his *Desopodesa* made an interesting reference to ivory figures. He asserted that the wealth of a miser lives in his dirty teeth and the blanket browned with smoke in the same way as the goddess *Sri* of the untouchable *chandala* lives in the figures made of dirty ivory (*danteshumalapurneshu*) which are wrapped in their dirty blankets.[9] In the *Kuttanimatam* of Damodaragupta (8th century A.D.), it has been said that Chintamani, the son of an officer, was wearing in his pendulous ear an ornament of ivory (*dantapankti*) which had a word like end (*karpatraka*).[1]

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[1] *Brihatsamhita*, II, 32, 19-26.

[2] *Brihatsamhita*, *slokas* 19 & 20, See also : A monograph on Ivory-carving in Bengal by G. C. Dutt, Calcutta, 1901, pp. 1-2.

[3] The *Manasara*, P. K. Acharya, Allahabad, n.d.; XLIV, 25-26.

[4] Punyavijayaji (editor), *Angavijja*, Bombay, 1957, pages 15, 112, 136 and 221.

[5] V. S. Agarwala, *Kadambari* (Hindi), Varanasi, 1958, p. 225, fn. I. See also Dr. Motichandra, "Ancient Indian Ivories."—Prince of Wales Museum Bulletin, No. 6, 1957—1959, p. 6.

[6] V. S. Agarwala, *Harshacharita* (Hindi), Patna 1953, p. 17.

[7] *Ibid*, p. 66.

[8] V. S. Agarwala, *Harshacharita*, 1953, p. 214.

[9] *Desopodesa*, edited by M. Kaula, Poona, 1923, II, 30. See also Dr. Motichandra, op. cit. p. 7.

Period VI (751 A. D. to 1100 A. D.):

Twenty-five sites relating to this period have been explored or excavated, out of which in 4 sites ivory objects have been found. A statement giving the break-up of the sites explored or excavated where ivory objects have been found is furnished below:

Name of the region	A	B
North-Western India	7	3
Northern India	7	—
Western India	5	—
Central India	2	1
Southern India	4	—
Eastern India	—	—
TOTAL .	25	4

A = Total sites explored or excavated.
B = Sites where evidences of ivory objects have been found.

As in the earlier period in this period also there has been not only reduction in the number of sites where ivory objects have been found, but also in the centres where evidences of the existence of the craft are available. A list of 154 potential centres has been prepared out of which in respect of only one centre evidences of the existence of the craft are available. A statement giving the breakup of the potential craft centres as well as the centres where evidences of the existence of the craft are available is furnished below:

Name of the region	X	Y
North-Western India	57	1
Northern India	18	—
Western India	30	—
Central India	16	—
Southern India	24	—
Eastern India	9	—
TOTAL .	154	1

X = Potential centres.
Y = Centres where evidences of ivory objects have been found.

Other scholars have also noticed the paucity of ivory objects in this period. As stated by Dr. Moti Chandra[2] "that the art of ivory carving in Mediaeval India did not receive the same attention as in ancient India is further supported by a lack of references to ivory carving in contemporary literature. It is possible that the art of ivory carving was no longer conceived as an individual means of artistic expression, but was neglected to the category of handicrafts. The real position of ivory carving in the mediaeval period, however, is at best but a surmise and at some future date new discoveries may prove that after all ivory carving was not a neglected art in Mediaeval India."

Period VII (1101 A. D. to 1500 A.D.):

There are 32 explored or excavated sites of this period out of which in three sites ivory objects have been found. In respect of only one site, literary references about the existence of ivory craft are available. A statement giving the region-wise breakup of the explored or excavated sites and the sites where ivory objects have been reported to be in existence is furnished below:

Name of the region	A	B
North-Western India	3	1
Northern India	7	—
Western India	9	1(1)
Central India	6	—
Southern India	4	—
Eastern India	3	1
TOTAL .	32	3(1)

A = Total sites explored or excavated.
B = Sites where evidences of ivory objects have been found.

Figures within brackets show the number of sites where objects have not been found, but for which references are available in literary sources.

It is obvious that during this period also ivory was not a flourishing craft. There are 112 potential craft centres in this period, out of which only in two centres craft objects have been found. In respect of another centre, literary evidences about the existence of the craft are available. A statement giving the breakup of the potential centres and the centres where evidences

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[1] *Kuttanimatam* edited by T. S. Rama, Bombay, 1923, V 92.

[2] Prince of Wales Museum Bulletin, No. 6, 1957-59, p.48.

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about the existence of the craft have been found or reported is furnished below:

Name of the region	X	Y
North-Western India . . .	34	—
Northern India	15	—
Western India	17	1(1)
Central India	15	—
Southern India	23	—
Eastern India	8	1
TOTAL .	112	2(1)

X = Potential centres.

Y = Centres where evidences of ivory objects have been found.

Figures within brackets show the number of sites where objects have not been found, but for which references are available in literary sources.

It is noteworthy that only in two extreme ends of the country, namely the western region and the eastern region evidences of the existence of the craft during this period are available.

Some information about the prevalence of the craft during this period, without the indication of any centre, has been furnished in *Manasollasa.*[1] It enjoined that a person who killed an elephant was to be awarded capital punishment by the king. If, however, an elephant died a natural death its tusks were to be brought to him. In the same source, a chair called *prishthadharasana* has been described as follows, "it is made of teak wood and decorated with ivory (*dantidantasuchitritam*)".[2] Besides, eight types of benches (*manchas*) have been described in *Manasollasa* which includes one, which was made of ivory (*dantanghri*)[3]. In the palace architecture an ivory room was of special attraction. It had a balcony (*mattavarana*) made of ivory.[4]

Period VIII (1501 A.D. to 1800 A.D.):

There are 11 excavated sites of which only in one site ivory object has been found. A statement giving the region-wise breakup of the excavated sites as well as of the sites where evidences about the craft objects have been found is furnished below:

Name of the region	A	B
North-Western India	2	—
Northern India	4	1
Western India	3	—
Central India	2	—
Southern India	—	—
Eastern India	—	—
TOTAL	11	1

A = Total sites excavated.

B = Sites where evidences of ivory objects have been found.

In this period the craft seems to be coming out of the oblivion to which it was neglected in the early mediaeval period. But if the potential craft centres of this period are taken into consideration, it is found that even in this period, the craft did not receive adequate attention. A statement giving the region-wise break-up of the potential centres and the centres where craft objects have been found or reported to be in existence is furnished below:

Name of the region	X	Y
North-Western India	57	3(3)
Northern India	35	2(1)
Western India	43	–(3)
Central India	31	—
Southern India	49	6
Eastern India	29	1
TOTAL	244	12(7)

X = Potential centres.

Y = Centres where evidences of ivory objects have been found.

Figures within brackets show the number of centres where objects have not been found, but for which references are available in literary sources.

It is very interesting to note that it is the first time after the 3rd period (7th century B.C. to 3rd century

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[1] *Manasollasa* of Somesvara, G. K. Shrigondekar, (editor) Vol. I, Baroda 1921, 3. 180.

[2] *Ibid*, Vol. II, 1939, 1144.

[3] *Ibid*, 1672. , 1684

[4] *Ibid*, 126

B.C.) that evidences of ivory craft are found in South India. It is also noteworthy that compared to the previous period during this period the craft has wider regional distribution.

Among the literary references about the craft of this period mention may be made of "Voyages to the East Indies 1655" by Terry. In it, while describing the people of India it has been written as follows:— "Their skill is likewise exquisite in the making of cabinets, boxes, trunks and strandishes, curiously wrought, within and without, inlaid with elephant's teeth or mother-of-pearl, ebony, tortoise-shell or wire."[1]

Period IX (1800 to 1900 A.D.)

During this period the craft objects have been found or reported in 63 centres. A statement giving the break-up of the same is furnished below:

Name of the region	X	Y
North-Western India	41	14(4)
Northern India	30	5
Western India	18	8(4)
Central India	11	2(3)
Southern India	27	4(6)
Eastern India	16	5(8)
TOTAL	143	38(25)

X = Potential Centres.

Y = Centres where evidences of ivory objects have been found.

Figures within brackets show the number of centres, where objects have not been found, but for which references are available in published sources.

From the statement it is obvious that during the 19th century, there was not only a revival of the craft, but in many areas it came into existence for the first time. This is interesting in the context of the fact that during this period many of the traditional industries of India suffered a setback. A different position in respect of ivory craft may be because of the fact that on the one hand it did not have outside competitors, on the other, it was getting patronage of foreign consumers as well the new urban class which was emerging out in the country.

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[1] A Monograph on Ivory-carving in Bengal, by G. C. Dutt, Calcutta, 1901, pp. 1-2.

CHAPTER III

HYPOTHESES RELATING TO THE PROBABLE FACTORS THAT MIGHT HAVE CONTRIBUTED TO THE VOLUME AND THE PATTERN OF DISTRIBUTION OF THE CRAFT IN DIFFERENT PERIODS

(a) Availability of raw-material

It can be assumed that in early times when technology was at very low level and scope for external trade was limited, the incidence of the craft was conditioned to a large extent by the availability of ivory. At present elephants are found in the forests of Assam, North Bengal, North Bihar, Uttar Pradesh, Mysore and Kerala. It is not known what was the exact distribution of elephants in India in ancient periods. It is understood that some tusks have been found at Kalibangan of Rajasthan, which is a site of Harappan period. Report in this matter, however, is still to be published. At Autha (District Gurgaon, Haryana), a site of Post-Harappan period, an elephant skeleton has been found at the N.B.P. level.[1] During the Mughal period existence of elephants in good number in Northern and Central India has been reported. According to S. M. Edwardes and H.L.O. Garrett[2] "In Babur's day the rhinoceros abounded in the country adjacent to the Gogra river and also in the neighbourhood of Peshawar; wild elephants were found at Karrah in the modern Allahabad district and were hunted by Akbar in places like Agra, Malwa, Marwar and Bihar, where they are quite unknown. Practically the whole area of the modern Ghazipur seems to have been a forest swarming with herds of elephants and rhinoceros". S.S. Kulshreshtha[3] has reported that "in the hilly country south of the Ganges and the Jamuna, elephants were common.........Khulasat makes a reference that as late as 1695 wild elephants roamed over the forest of Khalifabad. "The jungles of Bijaigarh, Hindia and Garh were noted for sheltering wild elephants."

It is obvious from the facts furnished above that in earlier periods elephants had wider distribution than at present.[4] But it is difficult to say that availability of ivory influenced the fortune of the craft to a very significant extent. It can be presumed that even in early periods, elephants roamed about the forests of Assam, North Bengal, Mysore and Kerala, but it is only in recent times that ivory has become a flourishing craft in these areas. The earliest time when existence of ivory objects has been reported from Assam and South India is the Epic Age (2nd century B.C. to 3rd century A.D.). On the other hand ivory objects have been found at Rupar and sites of Kashmir where elephants are unlikely to have existed any time. Further, early accounts show that ivory was being imported in India from other countries. In Bernier's travel[5] there is a reference which shows that elephants were imported from Pegu, Siam and Ceylon. It appears that another source from where elephants' tusks were obtained during the late Mughal period is Ethiopia.[6] Elephants' tusks were also imported at that time from England which used to get the supply from Africa.[7]

In view of the fact that the elephants or elephants' teeth were imported from outside in some parts of the country, it should not be concluded that in India as a whole there was shortage of raw-materials for ivory craft. During the period between seventh cent. B.C.—320 A.D. there is a reference which shows that "ivory was one of the chief articles of export from India.[8] In the Periplus of the Erythraean sea (first century A.D.), it has been mentioned that India had flourishing trade in ivory with Rome. In the Liang-shu[9] which refers to early mediaeval period (tenth to twelfth century A.D.), there is a list of Indian exports which includes horns of rhinoceros, ivory, skin of leopards, tortoise shell, gold, silver, muslins etc.[10] In the mediaeval period it has been recorded by travellers in respect of Cambay "that the workmanship of its inhabitants in weaving and dyeing, in embroidery as well as various works of art, made of wood, metal, ivory, amber, horns of sea-horses, and various kinds of stones, was the wonder of the world. There are found all kinds of cotton and silk manufactures, perfumes, innumerable things of ivory, beautiful woodwork of all kinds, bed-spread of all colours, works of art made of coral as well as agates, carnelians, onyxes and other precious stones, delicate cushions, quilted cloths, canopies of delicate workmanship, beautiful paintings, shields made of tortoise shell which were 'wrought and inlaid vary workmanlike', fair signets, rings, buttons, handles of knives and beads of white as milk stone which were sold in all parts of the world"[1]. It is obvious from the fact that on the one hand elephant and elephant's teeth were imported in India and on the other ivory objects were exported from India, that the availability of the raw-material did not always seriously affect the prevalence of the craft. It is also obvious that the craft was since the very early period involved in market economy. In other words, even though there is no definite information whether it was being produced for the local community as well, it can be said definitely that it was being produced for larger market.

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[1] Indian Archaeology, 1964-65, p. 63.

[2] Mughal Rule in India, London, 1930, p. 281.

[3] The Development of Trade and Industry under the Mughals (1526 to 1707 A.D.) 1964, pp. 106-107.

[4] A statement provided by the Zoological Survey of India indicating the availability of elephant in different regions in different periods is furnished in Appendix III.

[5] Bernier, Volume I, 1826, page 217.

[6] D. Pant, The Commercial Policy of the Mughals, 1930, p. 241.

[7] *Ibid*, p. 207.

[8] Mazumdar, R. C. edited, The Age of Imperial Unity, 1960, Volume II, page 604.

[9] Chau Ju Kua, page 113.

[10] Niyogi, Puspa—Contribution to the Economic History, of Northern India (from the 10th to the 12th century A.D.) Calcutta, 1962, p. 139.

(b) Contribution of economic, political and social factors to the prevalence of the craft.

As mentioned earlier, during the Harappan period ivory objects have been found only in four out of the 12 excavated sites of that period. The four sites namely Harappa, Mohenjodaro, Lothal and Kalibangan appear to be fairly large-sized cities at that time. The other excavated sites were comparatively small townships. It appears to be in conformity with the expected pattern that the ivory objects were found in the city sites and not in the township sites. By its very nature ivory craft can flourish only where there is a fairly sizeable affluent class who can patronize the craft. It is obvious that only the socio-economic setting of city life would provide the congenial condition for the craft. It is further to be noted that the Harappan culture, centred round commercial activities on a large scale, having connections with the river valley civilizations of the Middle East. It is quite possible that ivory craft which flourished in the Harappan culture sites had international market. No definite evidence, however, is available in this regard.

The Harappan culture sites which have been excavated till now, are distributed only over north-western and western regions of Indian Sub-continent. No sites of this period have been found in the other regions. But in the Post-Harappan period, a good number of sites have been found in the other regions as well. There are altogether 39 excavated sites of this period. Out of these 39, 12 are in north-western region and one is in northern region. It is interesting to note that in not a single site out of the 12, in the north-western region, evidences of ivory craft have been found. In the northern region, however, some evidences of ivory craft have been found in the single site which has been excavated. The only other site of this period, where evidences of ivory craft have been found, is in the eastern region. It seems not unlikely that the paucity of ivory craft in this period is related to the socio-political conditions of the country. This was the period when the Aryan pastoral and semi-pastoral hoards were spreading over different parts of India. In the scale of techno-economic developments they were barbarians and were the enemies of city civilisation. In the *Rig Veda* there is a prayer where the assistance of Indra has been invoked for plundering the cities of the *Asuras*, the enemies of the Aryans. There is no evidence that in this period any commercial or industrial centre flourished in any part of the country. It also appears that there was hardly any large kingdom with centralised authority. The *Rig Veda* says nothing of fixed settlement, let alone brick-built cities or of reading, writing, art and architecture. Technology amounted mostly to the construction of chariots, tools and weapons of war, it belonged primarily to the god Twashtri and his followers, both seemingly of Indus origin. However, there was no caste or class differentiation within the tribe at this stage; the craftsmen were still free members of the tribe, not degraded in the caste status as they would become at the next stage when the tribes began to dissolve.[2] It appears that towards the later part of this period some crafts relating to the needs of an upper class came into existence. In the *Vajasaneyi Samhita* (XXX) and in the *Taittiriya Brahmana* (III.4) there is a very comprehensive list of the professions, occupations, arts and crafts of this period which includes among others the professions of a jeweller, an elephant-keeper, a worker in gold, a boat-propeller, a money-lender and a barber. It should be noted here that there was no appreciable break in the economic life of the Vedic Aryans from the age of the *Rig Veda* down to the age of the *Brahmanas* save that there was a more extensive knowledge and use of different kinds of metals.[3] It is quite possible that the sites of this period which have been found scattered over the different regions of India, came into existence not as a product of the socio-cultural milieu of their respective regions, but through the settlement of the population who were dispersed from the earlier Harappan city-sites on the destruction or degeneration of those sites. At any case, it is quite clear that the socio-cultural and

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[1] Balakrishna, "Commercial Relations between India and England", London, 1924, p. 38 quoted by Jha, S. C. in "Studies in the Development of Capitalism in India" Calcutta, 1963, P. 58.

[2] Kosambi, D. D. 1965, p. 81.

[3] The Vadic Age—Vol. I, edited by R. C. Majumdar, 1965, 4th edition, pp. 466-467.

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political conditions in this period were not congenial for the cities to flourish. It is, therefore, no wonder that only in two sites evidences of ivory have been found. In fact, in this period except for pottery and crafts related to war and chase, there is hardly any evidence of other crafts being in a flourishing condition. The two sites, Chirand in Bihar and *Pandu-rajar Dhibi* in West Bengal, where evidences of ivory have been found, appear to have been small townships. It is quite possible that these were seats of some important political authorities and the craft came into existence to serve the power elites. It is, however, not possible to say anything categorically beyond making this conjecture in a general way. In the third period namely 7th century B.C. to 3rd century B.C. evidences about the existence of the craft have been found in all the regions excepting the southern region. In this period, the social of this period there was no paramount power in North India underwent a complete change. At the beginning of this period there was no paramount power in North India, but there were a number of important kingdoms namely Magadha, Kosala and Vatsya. There were also a few minor kingdoms, for instance, Kuru, Panchala, Surasena, Kasi, Mithila, Anga, Kalinga, Asmaka, Gandhara and Kamboja. A large number of *Mahajanapadas* (great countries) also grew up in different regions of India. Among them mention may be made of Gandhara, Kuru, Matsya, Kamboja, Asmaka, Chedi, Avanti, Kasi, Vaisali, Anga, Magadha, Kosala, Vriji, Malla, Vatsya, Panchala, Surasena and Kalinga. During this period also took place the rise and fall of the Magadha, Nanda and Maurya dynasties in succession. Spread of Buddhism and Jainism and the invasion of Alexander also took place during this period.

The developments indicated above seem to have created a congenial condition for the promotion of various crafts including the crafts relating to the upper classes. During the Maurya rule, a centralised government with its bureaucratic structure came into existence. Commercial and cultural relations were also established with various countries. The spread of Buddhism appears to symbolise the strivings of the trading classes for creating a condition of life where they could give free play to their aspirations. Thus, it appears that a congenial condition came into existence for ivory and deluxe crafts to flourish. This was also the period of efflorescence of the creative energy of the population in various fields. It is in such a socio-cultural setting that the ivory workers played their role in the community. They used to produce both decorative and utilitarian objects like stopper, hair-pin, comb, bangle, pendant, ear-reel, plaque and mirror handle. Benaras was one of the important centres of ivory craft in this period. The industry was located in a particular portion of the city which was known as the ivory workers' street, (*Dantakaravithi*). It is presumed that in many of the other cities also the ivory craft had similar recognised place in the society. In the *Arthasastra* there is a mention that an import duty of 1/10th to 1/5th of the value of the ivory products had to be paid by craftsmen.[1] In the fourth period, namely 2nd century B.C. to 3rd century A.D., ivory objects have been found in 18 sites. The literary evidences of its existence have also been found in respect of other six sites. It appears that in this period the industry was in quite a flourishing condition. Besides, it is in respect of this period that the first evidence of the existence of the craft in South India is found.

This was the period when Indo-Greek contact and Indo-Roman contact were most intense. The decline of the Maurya Dynasty and the rise of the Sunga Dynasty in North India also took place in this period. In Western India foreign tribes had formed settlements and carved out kingdoms which were at first subordinate to the Indo-Parthians and subsequently to the Kushan sovereign powers. In South India, this period marked the ascendancy of the Cholas, Pandyas and Cheras. Saivism very much flourished at this time, though worship of Vishnu was not uncommon. As reported by Ptolemy and Periplus, trade and commerce were in flourishing condition. As regards Eastern India definite information is not available for all the areas. In Orissa, the king Kharavela came in conflict with the Sungas. The latter were the supporters of Brahmanical Hinduism, whereas Kharavela was the supporter of Jainism. Traces of feudal system in India are first found at this time and the village community system with agriculture as the pivot and local industries as part and parcel of the agrarian structure was emerging out as the basic organisation of political and social system of the country. According to Dobb[2], the characteristic features of the feudal organisation, as related to crafts, are as follows: —

"(1) A low level of technique in which the instruments of production are simple and generally inexpensive, and the act of production is largely individual in character; the division of labour.........being at a very primitive level of development.

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[1] Patra, A. C. "The Laws Governing Craftsmen and their Crafts from Ancient days till to-day in India", Census of India, 1961, Volume I, Part VII-A, p. 15.

[2] Quoted by Jha, S.C. in "Studies in the Development of Capitalism in India", Calcutta, 1963, p. 3.

(2) Production for the immediate need of the household or village community and not for a wider market.

(3) Demesne-farming: farming of the lord's estate, often on a considerable scale by compulsory labour-services.

(4) Political decentralisation.

(5) Conditional holding of land by lords on some kind of service-tenure.

(6) Possession by a lord of judicial or quasi-judicial functions in relation to the dependent population."

As pointed out by Jha[1], feudalism in India also had some of these main characteristics. In the history of India origin of feudalism can be traced to Kushan times. But the Gupta period marks the beginning of some feudal practices. The big difference that Indian feudalism had from European feudalism was in the village community system. In its economic make-up it had a good combination between the agriculture and the handicraft which provided an equilibrium in the society.

In the context of the fact that production tended to be for the immediate need of the household or village community and not for a wider market, it is rather significant that even in this period ivory as well as a few deluxe crafts were not only in flourishing condition, but also were in a position of being exported to various countries. It appears that even at this time the socio-economic structure of India was marked by a dual system. Whereas the production for mass consumption was guided by the system of local community life, production for sacerdotal and secular power elites and outside market was guided by an altogether different system.

Here it would not be out of place to briefly indicate the salient features of the dual system of economy, as during the later periods with certain modifications the same continued till the emergence of mercantile economy with the oncoming of the British.

As mentioned by Sharma[2] "that local units of the production were coming into existence can also be inferred from the paucity of coins of common use from the Gupta period onwards. While the Indo-Bactrians, and especially the Kushans, issued a considerable number of copper coins, which were evidently in common use in the Punjab, and occasionally are found even as far as Buxar in Bihar, the Gupta emperors issued only a few copper coins......... The rise of the local units of production undermined central authority."

"Local officers were gradually assuming economic power. Vatsayana informs us that peasant women were compelled to fill up the granaries of the village headman, take things into or out of his house, clear or decorate his residence, work in his fields, and spin yarn of cotton, wool, flax or hemp for his clothes, so that clothes might be supplied to him locally. Some of the commodities thus produced were also put on sale, apparently to cater for the simple needs of the villagers. The Maurya state regulation of trade and industries was giving way to the management of these affairs by the chiefs of local economic units, independent of the central control.[3]

Simultaneously, there are evidences of the existence of crafts free of the control of the local communities. As "in Post-Maurya times we get the earliest epigraphic testimony regarding the existence of the guilds of artisans. Artisans were organised under their headmen, who probably enjoyed the favour of the king. During the second century A.D. in the Satavahana territory money (in silver *panas*) was deposited by the lay devotees of Buddhism with the potters, the oil millers and the weavers for the purpose of providing robes and other necessities for the monks. In the same century a sum of money was deposited by a chief with the guild of flour makers of Mathura out of the monthly interests of which a hundred Brahmans could be served daily. Thus the craftsmen organised in guilds could function independently. Evidently they could purchase raw materials and implements with money deposited with them and could pay interest on it, out of the proceeds from the sale of their commodities. Literary evidence indicates that the number of guilds had increased during this period."

From the economic point of view, the most important development of the period was the thriving trade between Southern India and the Roman Empire. In the beginning the major part of this trade seems to have been by land. But the movement of the Sakas, Parthians and Kushanas which followed from the first century B.C. put an end to this trade. The Parthians of Iran, however, imported iron and steel possibly from China or India. But from the first century A.D., trade was carried on mainly by sea. The discovery of monsoon by Hippalus in A.D. 46 gave a great impetus to this trade, which may have existed in driblets in earlier times. The sailors now become armed with better knowledge of navigation, which enabled them to call at the Indian ports of Bhrigukaccha (Broach), Arikamedu (Pondicherry) and Tamralipti. But the trade between India and Rome was not carried on in articles of daily or common use. The details show a brisk commerce in luxury goods, but no extensive production by large Industries."[1]

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[3] *Ibid.*, p. 84.

It is in the context of the existence of crafts and industries, virtually dissociated from the larger economic and social processes of the country that deluxe crafts like ivory-carving, silk brocade industry etc., flourished in this period. It is easy to visualise that the compartmentalisation of the economy in course of time led to the compartmentalisation of the political structure as well, resulting in stagnation and decline of the economic and political processes both.

In the fifth period, *i.e.*, 4th century A.D. to 750 A.D. the picture of the flourishing crafts disappeared. In this period, there was a degeneration of many crafts, among the notable exceptions mention may be made of stone icon-making, decorative pottery and terracotta. It is not unlikely that while this period marked the setback of crafts and industries oriented to wider urban consumption and export, the emergence of elitist crafts and industries, patronised by temples and kings also took place in this period. Here it may be recalled that during the Maurya period also, there were crafts and industries specially organised to serve the needs of the king and political elities. But those industries were mostly State owned. During the Post-Maurya period there was hardly any State ownership of industries. It seems that a shift in the centre of political power within the community had taken place even in Pre-Gupta period. As noted by Sharma[2] "Some allied developments such as strengthening of guilds helped to improve the position of artisans". "Epigraphic evidence of the period shows that the guilds not only issued coins and seals, but also maintained their militia, which, according to the Kalachuri inscriptions, was known as *Srenibala*. The increasingly autonomous character of the guilds as virtually independent units of production and political power can be inferred from the rules which govern the relation between the guilds and the State."[3]

It is beyond doubt that the above process of the immediate Pre-Gupta period further intensified during the period of rise and fall of the Gupta Empire. Before discussing the same, some idea would be given of the dynasties that ruled over the different parts of the sub-continent. Towards the later part of the period took place the invasion of the Hunas in North India and the Gupta empire was broken into small states. In early 7th century another great power emerged in Northern India, namely, that of the Pushyabhuti Dynasty. Harshavardhan was the scion of this dynasty. In Southern India, the Vakatakas, the Pallavas and the Chalukyas ruled over the different parts of the country. In Eastern India, the Guptas exercised their authority for some time, but afterwards the people of Gauda threw them off under the leadership of Sasanka. In Kamarupa, Bhaskaravarman ruled in early 7th century. His dynasty was later on succeeded by *Mlechchha* rulers, among whom Salastambha finds mention in a copper plate. In Orissa, the Guptas ruled for a long time. After that Mana and Sailodbhava families came into power. Socially and culturally, the most important significance of this period is the strong Brahmanical reaction against the ascendancy of rival faiths like Buddhism and Jainism. During the later part of this period, again started the invasion of the western and north-western part of India by the Arabian Muslims. There was also a short thrust in north-eastern India by the Chinese during the late Gupta period. But the Chinese could not consolidate their possession in any part of India.

It is difficult to say whether these political and social conditions had direct bearings on the ivory craft. But as noted earlier during this period certain characters of Indian economic structure were being crystallised which had far-reaching results on the later developments. The process of decentralisation of the economic and political structure, which was noticed in the earlier period, seem to have been intensified during this period though the granting of lands to the Brahmans existed on an extensive scale. The grants of lands with the transfer of all sources of revenue, and the surrender of police and administrative functions became more frequent from the fifth century A.D. Land grants were made to the temples too, enjoying all those administrative and political autonomies as enjoyed by the Brahman donees. From these priestly and religious bodies an intermediary in the shape of a warrior class was also brought into being.[4]

Before the implications of the above developments are considered, it is to be noted that a deluxe craft

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[1] Sharma, R. S. Light on Early Indian Society and Economy, 1966, pp. 75—77.

[2] *Ibid*, p. 86.

[3] *Ibid*, pp. 84-85.

[4] Jha, S.C., *op. cit.*, 1963, pp. 4-5.

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In the context of the fact that production tended to be for the immediate need of the household or village community and not for a wider market, it is rather significant that even in this period ivory as well as a few deluxe crafts were not only in flourishing condition, but also were in a position of being exported to various countries. It appears that even at this time the socio-economic structure of India was marked by a dual system. Whereas the production for mass consumption was guided by the system of local community life, production for sacerdotal and secular power elites and outside market was guided by an altogether different system.

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It is in the context of the existence of crafts and industries, virtually dissociated from the larger economic and social processes of the country that deluxe crafts like ivory-carving, silk brocade industry etc., flourished in this period. It is easy to visualise that the compartmentalisation of the economy in course of time led to the compartmentalisation of the political structure as well, resulting in stagnation and decline of the economic and political processes both.

In the fifth period, *i.e.*, 4th century A.D. to 750 A.D. the picture of the flourishing crafts disappeared. In this period, there was a degeneration of many crafts, among the notable exceptions mention may be made of stone icon-making, decorative pottery and terracotta. It is not unlikely that while this period marked the setback of crafts and industries oriented to wider urban consumption and export, the emergence of elitist crafts and industries, patronised by temples and kings also took place in this period. Here it may be recalled that during the Maurya period also, there were crafts and industries specially organised to serve the needs of the king and political elities. But those industries were mostly State owned. During the Post-Maurya period there was hardly any State ownership of industries. It seems that a shift in the centre of political power within the community had taken place even in Pre-Gupta period. As noted by Sharma[2] "Some allied developments such as strengthening of guilds helped to improve the position of artisans". "Epigraphic evidence of the period shows that the guilds not only issued coins and seals, but also maintained their militia, which, according to the Kalachuri inscriptions, was known as *Srenibala*. The increasingly autonomous character of the guilds as virtually independent units of production and political power can be inferred from the rules which govern the relation between the guilds and the State."[3]

It is beyond doubt that the above process of the immediate Pre-Gupta period further intensified during the period of rise and fall of the Gupta Empire. Before discussing the same, some idea would be given of the dynasties that ruled over the different parts of the sub-continent. Towards the later part of the period took place the invasion of the Hunas in North India and the Gupta empire was broken into small states. In early 7th century another great power emerged in Northern India, namely, that of the Pushyabhuti Dynasty. Harshavardhan was the scion of this dynasty. In Southern India, the Vakatakas, the Pallavas and the Chalukyas ruled over the different parts of the country. In Eastern India, the Guptas exercised their authority for some time, but afterwards the people of Gauda threw them off under the leadership of Sasanka. In Kamarupa, Bhaskaravarman ruled in early 7th century. His dynasty was later on succeeded by *Mlechchha* rulers, among whom Salastambha finds mention in a copper plate. In Orissa, the Guptas ruled for a long time. After that Mana and Sailodbhava families came into power. Socially and culturally, the most important significance of this period is the strong Brahmanical reaction against the ascendancy of rival faiths like Buddhism and Jainism. During the later part of this period, again started the invasion of the western and north-western part of India by the Arabian Muslims. There was also a short thrust in north-eastern India by the Chinese during the late Gupta period. But the Chinese could not consolidate their possession in any part of India.

It is difficult to say whether these political and social conditions had direct bearings on the ivory craft. But as noted earlier during this period certain characters of Indian economic structure were being crystallised which had far-reaching results on the later developments. The process of decentralisation of the economic and political structure, which was noticed in the earlier period, seem to have been intensified during this period though the granting of lands to the Brahmans existed on an extensive scale. The grants of lands with the transfer of all sources of revenue, and the surrender of police and administrative functions became more frequent from the fifth century A.D. Land grants were made to the temples too, enjoying all those administrative and political autonomies as enjoyed by the Brahman donees. From these priestly and religious bodies an intermediary in the shape of a warrior class was also brought into being.[4]

Before the implications of the above developments are considered, it is to be noted that a deluxe craft like ivory can flourish in an economic and social setting where the financiers and craftsmen are not inhibited by religious and security considerations and where a sizeable class of consumers or patrons exists. It appears not unlikely that in the zeal of revivalism of Brahmanistic Hinduism the capital more flew into limited channels like construction of temples and manufacture of stone-icons and other religious paraphernalia. Secular crafts could be pursued only where there was assured patronage and protection. The importance given to fine arts during this period suggests the existence of a class which was more ideologically oriented. But, it is obvious that unless congenial conditions prevailed which ensured mobility of capital and skill, some crafts and industries would flourish, while others would degenerate. Paucity of ivory, bone and shell objects during this period may be the outcome of the development of some rigidity of outlook caused by religious considerations. For instance obsession about *Ahimsa*, might have created reluctance among the craftsmen to handle animal products. This is, however, only a suggestion. More mediculous research is necessary to test the hypothesis. It however, appears that, if really a general degeneration of crafts and industries with certain exceptions and a stagnation of the economic structure as a whole took place, the most important factor that contributed towards it, was the complete dissociation of the mode of production for the classes living in urban and administrative centres from the mode of production for the masses living in the rural areas, as a result of which the production for the classes failed to invigorate the production for the masses technologically and the production for the masses failed to support the production for the classes economically by reducing the over-head charges. For a proper appreciation of the weakness of the infrastructure provided by the village community system, the salient features of the same may be noted, which are as follows:

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[1] Sharma, R. S. Light on Early Indian Society and Economy, 1966, pp. 75—77.

[2] *Ibid*, p. 86.

[3] *Ibid*, pp. 84-85.

[4] Jha, S.C., *op. cit.*, 1963, pp. 4-5.

(1) "Passed on possession in common of the land on the blending of agriculture and handicrafts, and on the unalterable division of labour;

(2) The chief part of the products destined for direct use by the community itself and does not take the form of commodity;

(3) Production here is independent of that division of labour brought about, in Indian society as a whole, by means of the exchange of commodities;

(4) The simplicity of the organisation for production in these self-sufficing communities that constantly reproduce themselves in the same form, and when accidentally destroyed, spring up again on the spot and with the same name;

(5) The secret of the unchangeableness of Asiatic societies, an unchangeableness in such striking contrast with the constant dissolution and refounding of Asiatic States, and the never-ceasing changes of dynasty".[1]

It is obvious from the above that the economic structure was oriented towards the perpetuation of low level of technology for the country as a whole. The exquisite skills and marvels of workmanship which were found in isolated elitist crafts, were not the products of the society at large; these were the manifestations of esoteric cultures pursued by a few. Undoubtedly ivory craft belonged to this category.

Sixth period (751 A.D. to 1100 A.D):

During this period, out of 25 explored or excavated sites only in four sites ivory objects have been found. Out of 154 potential craft centres evidences of the craft have been found in only one centre in addition to the four mentioned above. It is obvious from the above that during this period, the craft was in a languishing condition. On a long range the most important event of this period was the tripartite struggle between the Palas, the Rashtrakutas and the Gurjara Pratiharas for establishing supremacy in the Gangetic Doab. During the reigns of the Senas and the Palas both Buddhism and Hinduism flourished side by side. Ballal Sena revived the *Kaulinya* system and as a result caste system became rigid. Art, architecture and sculpture flourished in a number of centres. Both cultural and commercial contacts were maintained with countries like Nepal, Tibet, China, Japan, Burma, Ceylon, Jabadvipa and Sumatra. Beginning from the middle of this period there were constant Muslim invasions in the north and north-western regions. Among these invasions special mention may here be made of those of Sultan Mahmud and Mohammad Ghori. In the south, the rise of the Rashtrakutas of Malkhed, the Chalukyas of Vatapi, the Pallavas of Kanchi and the rise of the Chola, Chera and Pandya kingdoms are noteworthy. Though, there was not much political stability due to constant conflicts among the neighbouring kingdoms, art, architecture and culture flourished to a great extent. The kings of this period were mainly devotees of Brahma, Vishnu and Shiva; but it appears that they followed a policy of religious toleration. They had also established commercial and cultural relations with other countries outside India. The Cholas had contact with Malaya, Sumatra, Java, Borneo, China, Japan and Rome.

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[1] Jha, S.C. *op. cit.*, 1963, pp. 7-8.

In the context of the above facts, when it is noticed that ivory was not a flourishing craft during this period one would like to understand what could have been the possible factor. According to Dr. Moti Chandra, it appears that the art of ivory carving was no longer conceived as an individual means of artistic expression, but was neglected to the category of handicrafts.[1] It is not clear what actually Moti Chandra wanted to convey by the above statement. It appears that according to him, while previously the motivation for the craft was the self-expression of the craftsmen, during this period it was more related to the system of production of handicrafts. This does not appear to be analytically a complete depictation of the situation. An artist given to self expression would require support to keep his body and soul together. On the other hand, as indicated earlier, handicrafts were manufactured under two systems, one holding good for the rural masses, the other holding good for the elites. Perhaps what Moti Chandra wanted to convoy is that in this period ivory craft ceased to receive adequate patronisation of the elites which would have enabled the artisans to strive for embellishments of the craft. With the elite patronisation withdrawn, the artisans had to depend on the larger community for support and at that level also the support was not adequate. This restatement of the position leaves open the question as to why the patronisation of the elites was withdrawn from the craft? Is it because of some change in the structure of finance or some shift in the nature of the elites? Or even, is it because of some change in the ideology and outlook of the elite? These questions remain unanswered in the present stage of the study.

Seventh period (1101 A.D. to 1500 A.D.):

During this period, Muslim rule was established over large portions of North-West India. There were, however, changes of one dynasty after another in quick successions, as in nightmare. The rise of the Rajputs also took place during this period in North-West India. In South India, the first Muslim invasion took place during the time of Allauddin Khilji. Later on, the Tughlaq dynasty consolidated its effective political power in large parts of this region. But, with the decline of the authority of the Delhi Sultanate independent kingdoms came into existence in course of time. Among them, mention may be made of the Bahmani kingdom, the kingdoms of Bijapur, Ahmednagar, Golkanda, Bidar etc. Vijaynagar kingdom famous for its arts and cultural activities also flourished during this period. In Eastern India, independent Hindu kingdoms continued to exist in spite of the spread of the suzerainty of the Delhi Sultanate over considerable parts of the region. In Orissa, local kings like Anantavarman, Narasingha I, Purushottama Gajapati, Prataparudra, etc. attained fame during this time. But with the death of Mukunda Harichandan in 1568, Orissa was conquered by the Karrani-Sultan of Bengal. It appears that during this period, due to the contact of two cultures, new ferment was created in the social life of India. Many of the old values were being replaced by new ones. An outstanding manifestation of the same was the *Bhakti* movement which flourished in different parts of India. It is considered by many that this movement marked the strivings of the artisan classes to assert their position in the society.

Beginning from the Post-Maurya period, when village republics became the dominant pattern of social organisation in India, pursuit of crafts was completely subordinated to the more of the agrarian structure and the craftsmen were having low status in the society. Their scope of social climbing was also very much restricted by the rigidity of the caste structure. In conformity with the social immobility, there was absence of economic freedom. The artisans produced, mainly for the local community and not for the market. The *Bhakti* movements of this period were in a way, protest against these intolerable conditions. It is not known to what extent the above developments influenced the position of ivory industry. It is, however, to be noted that out of the 32 excavated or explored sites of this period, only in three sites ivory objects have been found. Also, out of 112 potential centres only in respect of two centres, evidences of the existence of the craft have been available. There are also literary references in respect of one more centre. It can, therefore, be safely presumed that the craft was not in a flourishing condition during this period.

As in the previous periods, in this period also if the craft did not flourish, it is possible to draw only one conclusion *viz.*, that, it failed to attain the position of elitist craft.

It is, however, to be noted that during this period a change had taken place in the nature of court craft. As stated earlier, whereas during the Maurya period, there were state owned industrial enterprises, during the Post-Maurya period, the craftsmen not only freed themselves of state control, but also in some areas established their virtually autonomous units of political power. It seems that under such dispensation the supremacy of the state was not primarily in the political field, but in the social field in matters connected with internal relationship and military field in matters connected with external relationship. With foreign invasions and military conquests, the situation, however, underwent a complete change. As noted by Jha[1] "With the rise of new social forces from the fourteenth and fifteenth centuries, there started coming a change in the mode of production. Production up till now had been for use, but now commodities were being produced in which the monarchs started taking interest. .... In the Moghal period *Karkhanas* were started. *Karkhanas* were both of the emperor and of the artisans. The artisans worked on their own as well as in royal *karkhanas*. The artisans who bit by bit had accumulated some capital, had also their own *karkhanas* in which other artisans were working on the wage basis."

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[1] Moti Chandra, *op. cit.*, 1957-59, p. 48.

Kureshi[2] has made a mention of 36 *Karkhanas* during the rule of Firuz Shah. The *karkhanas* dealt with various types of goods including jewellery, textiles, wood etc. For instance, the *jamdarkhanah* turned out the best cloth in the empire. Muhammad-bin-Tughluq employed no less than 500 workers in gold brocade and 4,000 weavers of silk, who manufactured the cloth required by the household and for making the robes of honour which were so profusely bestowed.

There is, however, no mention of ivory objects being manufactured in any of the *karkhanas*. But it is not unlikely that ivory was manufactured for wider market and not under royal patronage by artisans who were brought together by master artisans and entrepreneurs. As stated by Mukherjee[3] during that period in addition to other organisations of production "there were whole villages and *muhallas* of cities and towns which devoted themselves to the production of specialized products whether cotton or silk fabric, gold, silver and brass manufacture, *bidri* work or ivory to mention only a few that commanded both Indian as well as foreign markets."

It is, however, obvious that there could not have been many centres where ivory objects were manufactured or consumed during this period, or else many more actual finds and literary references would have been available.

There is, however, no mention of ivory objects being manufactured in any of the *karkhanas*. There is a possibility that there was some reluctance in courts to make industrial use of the limbs of elephants, as elephants constituted an important wing of the militia. In this connection it is to be noted that in the 14th century Nikitin and Barbosa made a mention of export of elephant tusks from India. This seems to suggest that if ivory craft did not flourish, it was not because of paucity of raw material, but because of some other inhibitive factor. What could be the factor is a matter of conjecture, but it could very well be the one suggested here.

Eighth period (1501 A.D. to 1800 A.D.):

Out of the 11 explored or excavated sites of this period only in one site ivory objects have been found. Evidences of the existence of ivory are available in another 11 sites, though actual specimens were not found in these sites.

During this period a radical transformation was taking place in the organisation of the craft. Some of the craftsmen were becoming manufacturers themselves. As noted by Mukherjee[4], "During the Mughal period there was in India a considerable variety of arts and handicrafts, which, indeed exhibited a more advanced economic and financial organisation than the crafts in contemporary Europe. In the first place, in several handicrafts, the specialisation of task advanced to the extent that particular groups of artisans came to undertake distinct processes in the chain of production. Such integration and co-ordination of production were hardly reached in European handicrafts. Secondly, there were whole villages and *muhallas* of cities and towns which devoted themselves to production of specialized products, whether cotton or silk fabric, gold, silver and brass manufacture, *bidri* work, or ivory to mention only a few that commanded both Indian as well as foreign markets. Thirdly, the foreign trade in products of Indian arts and handicrafts developed a corresponding organisation of production, under which master artisans or entrepreneurs brought together groups of artisans who worked for them on the wage basis...... Artisans worked on their own account as well as in *karkhanas*, big and small, under master artisans, dealers and financiers."

The above picture of the industrial structure gives some insight into the total economic and political structure of the country. It seems that taking advantage

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[1] Jha, S.C. *op. cit.*, 1963, p. 36.

[2] Kureshi, The Administration of the Sultanate of Delhi, 4th edition, 1958, pp. 69—71.

[3] Mukherjee, Radhakamal, The Economic History of India : 1600-1800, (London : Longmans, Green and Co. Ltd.), 1914, p. 81.

[4] Quoted by Jha, S.C. *op. cit.*, 1963, pp. 36-37.

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of the existence of the warring factions among the political elites the artisans were throwing up industrial and financial elites of their own.

If, even in the content of this revolutionary development ivory craft did not flourish much during this period, it seems that the explanation would be either one or both of the following—

(a) For security and other reasons conspicuous consumption was limited to a highly selected oligarchy.

(b) The oligarchy for reasons of its own had inhibition in the matter of use of ivory objects.

(c) As a result, though ivory objects might have been manufactured by entire groups of artisans as mentioned by Mukherjee, the markets for the same were more likely to be outside the country than inside the country.

The above hypotheses are still to be tested in the light of empirical data. But it can be safely stated that whatever might be the state of actual use of ivory objects in the country, structurally, the condition had come into existence in this period for the flourishing of the crafts in the next period.

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CHAPTER IV

IVORY OBJECTS IN DIFFERENT PERIODS AND CENTRES—TYPES AND TECHNIQUES

A statement indicating the types of ivory objects found in different periods and centres is furnished at *Appendix IV*.

Analysing the statement, it is proposed to find out the following:

1. Types of objects which are characteristic of particular periods irrespective of centres.

2. Types of objects which are found in different periods irrespective of centres.

3. Types of objects which are found in different centres irrespective of periods.

4. Types of objects which are found in same centre in different periods.

Types of craft objects found in each period:

A statement indicating the types of objects found in different periods is furnished below:

Period I (Harappan)—(1) Jar-stopper, (2) Hair-pin (3) Comb, (4) Dice, (5) Vessel, (6) Awls, (7) needles, (8) Fish-like pieces, (9) Cubical gamesman, (10) Batton, (11) Rod, (12) Roundel, (13) Goblet-shaped terminal, (14) Cup, (15) Cylindrical gamesman, (16) Handle, (17) Kohl-Sticks (18) Pillar-shaped piece, (19) Shaft, (20) Cone, (21) Balusters, (22) Points.

Period II (Post-Harappan)—(1) Dice, (2) Arrow-heads and styluses, (3) Comb.

Period III (7th century B.C. to 3rd century B.C.)—(1) Stopper, (2) Casket, (3) Hair-pin, (4) Comb, (5) Dice, (6) Pot, (7) Awls and needles, (8) Bangle, (9) Ear-Pendant, (10) Human figure, (11) Ear-reel, (12) Ear-ornament, (13) Beds, bed-legs and lions, (14) Mirror-handle, (15) Handle, (16) Kohl sticks, (17) Arrow-head, (18) Seal.

Period IV (2nd century B.C. to 3rd century A.D.)—(1) Hair-pin, (2) Comb, (3) Die or gamesman, (4) Dice, (5) Awl, (6) Bangle, (7) Armlet, (8) Pendant, (9) Human figure (ritual), (10) Human figure (secular), (11) Elephant-rider, (12) Handle, (13) Sword-handle, (14) Mirror-handle, (15) Handle of Fan or fly-whisk, (16) Antimony rod (kohl stick), (17) Toy furniture or miniature chest, (18) Dagger, (19) Knife, (20) Disc, (21) Stick (22) Ring, (23) Bands and plaques including panels, (25) Seal.

Period V (fourth century A.D. to 750 *A.D.)*.—(1) Animal figure, (2) Figure of Buddha, (3) Ring, (4) Game-piece, (5) Casket, (6) Seal.

Period VI (751 *A.D. to* 1100 *A.D.*).—(1) Bangle (2) Figure (popularly known as charlemagne chess-man), (3) Figure of Buddha, (4) Male figure, (5) Three-tiered *stupa.*

Period VII (1101 *A.D. to* 1500 *A.D.*).—(1) Bangle, (2) Armlet, (3) Human figure (a-morous couple), (4) Figure showing a denseuse, (5) Throne leg, (6) Inlaid ivory work and turned articles such as bangle, chess-man, dice, chess-board, sword, bedstead and sword hilt, (7) Lid.

Period VIII (1501 *A.D. to* 1800 *A.D.*).—(1) Dice, (2) Plaque showing dancing female figure, (3) Plaque showing Mary teaching child Jesus, (4) Figure of *Gaja—Lakshmi*, (5) Human figure, (6) *Makara* head, (7) Casket, (8) Throne leg, (9) Ivory room, (10) Ivory bed-stead inlaid with gold, (11) Door-way inlaid with ivory, (12) Settee back rest, (13) Bangle, (14) Inlaid ivory works including turned articles such as bangle, sword-hilt, dice, chessman, chess-board and bed-stand, (15) Inlaid ivory works such as cabinets, (16) Inlaid ivory works such as writing-cases.

Period IX (1801 *A.D. to* 1900 *A.D.*).—(1) Comb, (2) Idol (Krishna), (3) Dice, (4) Bangle, (5) Mirror frame, (6) Box or Casket, (7) Door (inlaid with ivory), (8) Mat, (9) Fan, (10) Stick, (11) Chessman, (12) Paper-cutter, (14) Card-case, (15) Chair, (16) Scent-case, (17) Image, (18) Ring, (19) Button, (20) Vegetable products, such as chilly, brinjal, hibiscus etc. (24) Toys, such as jingling bell, chess-board, check-mat, humming top etc. (25) Elephant loaded with guns, (26) Miniature painting on ivory, (27) Paper-knife, (28) Elephant, (29) Camel, (30) Boat, (31) Sword-hilt, (32) Thumb-guards, (33) Models of bullock-carts, (34) Models of processions, (35) Models of marriage ceremonies, (36) Images of Durga, Kali, Jagaddharti etc., (37) Models of Jagannath's car procession, (38) Miniature palanquin, single or with bearers and attendants, (39) Elephant fighting with tiger, (40) Horse plain or with rider, (41) *Mayurpankhi*, (42) Camel with driver, (43) Cow, single or with calf, (44) Dog (45) Pig, (46) Buffalo, (47) Crocodile, (48) Deer, (49) Plough with ploughman, (50) Locket and chain. (51) Ear-ring, (52) Figures of (a) Ladies, (b) Hindu priests, (c) Washerman, (d) Water-carriers, (e) Peons, (f) Porters, (g) Tailors, (h) Sepoys, (i) Fakirs, (53) Bracelet with or without gold or silver mountings, (54) Knitting needles, (55) Crochet needles, (56) Photo frame, (57) Casket, (58) Fly-flap, (59) Elephant with a *howdah*, (60) Mouth-pieces of *hukkas*, (61) Ear-scatchers, (62) *Fig.* of tortoise, (63) Chain, (64) Hexagonal shrine, (65) Idol (Vishnu), (66) Brush-back, (67) Money-counting board, (68) Door-way, (69) Mirror-back, (70) Book-slide (ivory inlaid), (71) Inlaying wood with ivory, (72) Veneered ivory work such as *howdah* and chairs coloured with lac, (73) Jewel casket made of ivory on tortoise shell, (74) Billiard balls, (75) Dagger and sheath (76) Toys, (77) Models of buildings, (78) Paper-weight (79) Antimony rods, (80) Couch on the model of a *ghat* on the Ganges at Benares, (81) Models of fruits like (a) Almonds, (b) Mangoes, Capsicum pods etc. and flowers such as a single rose, (82) Painted ivory objects (wares) with the subjects like Cauvery Bridge, Trichinopoly rock temple and mosque, (83) Scissor, (84) Ivory inlaid desk and Work box, (85) Sandal-box and (86) Antimony box (*surmadani*).

Analysing the statement, it is found that number of types of objects vary from period to period. The same is indicated below:

Period	Types of objects
I (Harappan)	22
II (Post-Harappan)	3
III (7th century B.C. to 3rd century B.C.) .	18
IV (2nd century B.C. to 3rd century A.D.) .	24
V (4th century A.D. to 750 A.D.) . .	6
VI (751 A.D. to 1100 A.D.)	5
VII (1101 A.D. to 1500 A.D.)	7
VIII (1501 A.D. to 1800 A.D.)	16
IX (1801 A.D. to 1900 A.D.) . . .	85

The above figures broadly corroborate the vicissitude the frequency of distribution of craft centres in different of changes in the condition of the craft as analysed from periods.

Continuity of craft objects in different periods:

It is found that some of the craft objects are found in different periods. For instance, a dice is found in all the periods excepting the Fifth and Sixth periods. Combs are found from the Harappan period downwards to the Fourth period *i.e.*, 2nd century B.C. to 3rd century A.D. Later on, again these are found to be manufactured during the 19th century. A statement indicating the types of objects which are found during more than one period is furnished below:

Typologies	Periods
Jar-stopper . . .	I & III.
Hair-pin	I, III & IV.
Comb	I, II, III, IV & IX.
Dice	I, II, III, IV, VII, VIII & IX.
Awls and needles . .	I, III, IV & IX.
Batton	I & IX.
Handle	I, III & IV.
Kohl-sticks (antimony rods)	I, III, IV & IX.
Arrow-heads and styluses .	II & III.
Casket	III, V, VIII & IX.
Bangle	III, IV, VI, VII, VIII & IX.
Human figures . .	III, IV, VI, VII, VIII & IX.
Beds, bed-legs, bed-stead and lions.	III, VII & VIII.
Mirror-handle . . .	III & IV.
Sword-handle or hilt .	IV, VII, VIII & IX.
Seal	III, IV & V.
Gamesman or chessman .	IV, VI, VII, VIII & IX.
Armlet	IV & VII.
Dagger	IV & IX.
Stick	IV & IX.
Ring	IV, V & IX.
Bands and plaques including panels showing scenes	IV & VIII.
Animal figures . .	V & IX.
Figure of *Buddha* . .	V & VI.
Game-pieces . . .	V & IX.
Throne-leg . . .	VII & VIII.
Inlaid ivory-work . .	VII, VIII & IX.
Chess-board . . .	VII, VIII & IX.
Door way inlaid with ivory	VIII & IX.

Types of ivory objects found or reported to be in existence in different centres irrespective of periods :

Typology :

Jar-stopper	(1) Mohenjodaro, (2) Rupar.
Hair-pin	(1) Mohenjodaro, (2) Rupar, (3) Prabhaspatan, (4) Nagda, (5) Ujjain, (6) Taxila.
Comb	(1) Mohenjodaro, (2) Harappa, (3) Kalibangan, (4) Pandu-Rajar-dhibi, (5) Ujjain, (6) Taxila, (7) Nagda, (8) Rupar, (9) Nagal, (10) Malwa, (11) Poona, (12) Sattara, (13) Kanara, (14) Surat, (15) Delhi, (16) Ratlam (17) Dhar, (18) Alipura, (19) Berhampur, (20) Calcutta, (21) Panga, (22) Travancore (23) Vizagapatam, (24) Amritsar, (25) Kanpur.
Dice	(1) Mohenjodaro, (2) Chirand, (3) Ujjain, (4) Taxila, (5) Cambay, (6) Pataliputra, (7) Sylhet, (8) Sehwan town, (9) Surat, (10) Panga.
Vessel	Mohenjodaro.
Fish	Mohenjodaro.
Fish-like pieces	Mohenjodaro.
Cubical-gamesman	Mohenjodaro.
Roundel	Mohenjodaro.
Awls and needles	(1) Mohenjodaro, (2) Harappa, (3) Ujjain, (4) Chandraketugarh, (5) Berhampore.
Rod	(1) Mohenjodaro, (2) Harappa.
Goblet-shaped terminal	Harappa.
Cup	Harappa.
Cylindrical gamesman	Harappa.
Pillar-shaped piece	Harappa.
Shaft	Harappa.
Cone	Harappa.
Balusters	Harappa.
Points	Lothal.
Batton	(1) Mohenjodaro, (2) Sehwan town, (3) Calcutta.
Handle	(1) Harappa, (2) Rupar, (3) Arikamedu, (4) Nevasa.
Kohl-sticks (antimony rods)	(1) Harappa, (2) Ujjain, (3) Chandraketugarh, (4) Kapilavastu, (5) Rajghat, (6) Kanpur.
Arrow-heads and styluses	(1) Chirand, (2) Sonepur.
Casket or box	(1) Kapilavastu, (2) Chandraketugarh, (3) Vijaynagar, (4) Udaipur, (5) Junagarh, (6) Bhuj, (7) Kanara, (8) Mysore, (9) Berhampore, (10) Travancore, (11) Kanpore, (12) Surat.
Pot	Kapilavastu.
Bangle	(1) Chandraketugarh, (2) Nagal, (3) Kapilavastu, (4) Sirkap (Taxila), (5) Rupar, (6) Indragarh, (7) Hastinapura, (8) Dwaraka, (9) Surat, (10) Broach, (11) Jaipur, (12) Ajmer-Marwara, (13) Alwar, (14) Bikanir, (15) Pali, (16) Berhampur, (17) Panga, (18) Patiala, (19) Bombay.
Pendant	(1) Taxila, (2) Rupar, (3) Nagda, (4) Prabhaspatan, (5) Ujjain.
Human figures	(1) Bhirmound (Taxila), (2) Awra, (3) Kayatha, (4) Ter, (5) Pataliputra, (6) Kashmir, (7) Orissa, (8) Lucknow or Benares, (9) Berhampore (Murshidabad).
Ear-ornament (reel)	(1) Bhirmound, (2) Ujjain.
Beds, bed-legs, bed-stead and lions.	(1) Kapilavastu, (2) Cambay, (3) Vijaynagar, (4) Bombay.
Mirror-handle	(1) Ujjain, (2) Taxila.
Sword-handle or hilt	(1) Pragjyotisa (Assam), (2) Cambay, (3) Bombay, (4) Ratlam, (5) Dhar, (6) Alipura.
Gamesman or chessman	(1) Rajghat, (2) Masaon, (3) Cambay, (4) Bombay, (5) Sylhet,

Gamesman or chessman —contd.	(6) Kanara, (7) Sehwan town, (8) Jaipur, (9) Ajmer-Marwara, (10) Alwar, (11) Bikaner, (12) Palee, (13) Panga, (14) Kanpore.
Seal	(1) Rupar, (2) Ujjain, (3) Nevasa, (4) Nagari, (5) Dharani-kota, (6) Maheth.
Armlet	Ujjain.
Elephant-rider . . .	Kondapur.
Handle of fan or fly-whisk	Taxila.
Toy-furniture or miniature chests.	Taxila.
Dagger	(1) Sankaran, (2) Patiala, (3) Amritsar.
Knife	Taxila.
Disc	Chandraketugarh.
Stick	(1) Chandraketugarh, (2) Sylhet, (3) Berhampore, (4) Calcutta, (5) Balasore, (6) Kanpur.
Ring	(1) Taxila, (2) Assam, (3) Sehwan town (Karachi), (4) Berhampore.
Bands and plaques including panels showing scenes.	(1) Begram (Kafiristan), (2) Travancore, (3) Goa.
Animal figures . .	(1) Delhi, (2) Rewa, (3) Berhampore, (4) Orissa.
Figure of Buddha . .	(1) Kashmir.
Game pieces . . .	(1) Masaon, (2) Sehwan-town (Karachi).
Three-tiered *stupa* . .	(1) Bengal, Bihar or Orissa.
Inlaid ivory works such as doorway, cabinets, writing cases, etc.	(1) Cambay, (2) Bombay, (3) Tatta, (4) Bijapur, (5) Amber-Palace (Jaipur) (6) Udaipur, (7) Bikaner, (8) Amritsar, (9) Travancore, (10) Vizagapatam, (11) Mysore, (12) Hoshiarpur.
Chess-board . . .	(1) Cambay, (2) Bombay.
Sword	Cambay.
Lid	Dwaraka.
Figure of *Gajalakshmi* .	Karnatak region.
Makara head	South India.
Ivory room . . .	Vijay Nagar.
Ivory bed-stead inlaid with gold	Vijay Nagar.
Settee-back-rest .	Mysore.

The statement shows that if the time dimension is overlooked, some craft objects like comb, dice, casket or box, bangle, human figures, gamesman or chessman have wide dispersal. On the other hand, some craft objects have been found hardly in one or two centres throughout the entire range of history. For instance, ivory-fish has been found only at Mohenjodaro, Jar-stopper has been found only at two centres namely Mohenjodaro and Rupar.

Continuity of the craft tradition in different centres:

If examined in terms of continuity of the craft tradition, in the same centre in different periods, it is found that in some cases such continuity exists. For instance, at Prabhaspatan hair-pin is found both during the third and fourth periods. In Kashmir, figures of Buddha are found during the fifth and sixth periods and so on. A statement indicating the craft objects which are found in the same centre during more than one period is furnished below:

Name of the centre	Type of object	Period
Prabhaspatan	Hair-pin	III & IV.
Prabhaspatan	Pendant	III & IV.
Nagda	Hair-pin	III & IV.
Nagda	Pendant	III & IV.
Ujjain	Comb	III & IV.
Ujjain	Awls and needles	III & IV.
Taxila	Comb	III & IV.
Nagal	Comb	III & IV.
Nagal	Bangle	III & IV.
Kashmir	Figure of Buddha	V & VI.
Orissa	Throne leg	VII & VIII.
Dwaraka	Bangle	VI & VII.

Continuity of types of craft objects in different centres in different periods:

In the statement furnished earlier, continuity of craft objects in different centres as well as in different periods have been considered separately.

Technique:

In the techniques of manufacture of the ivory objects, there is both continuity and discontinuity. The same would be examined with reference to different periods, different types of objects and different centres.

Period and technique:

A statement indicating the different techniques of manufacture of ivory objects in different periods is furnished below:

Period	Technique
I (Harappan) . . .	1. Cutting with saw. 2. Use of lathe for making shafts. 3. Plaining of surface with die. 4. Incision. 5. Filling up of incised portion with black, red and yellow pigments.
II (Post-Harappan) . .	1. Incision.
III (7th century B.C. to 3rd century B.C.).	1. Incision and engraving. 2. Punching. 3. Decoration with chequers and hachures. . 4. Painting.
IV (2nd century B.C. to 3rd century A.D.).	1. Incision and pressing with pointed narrow rods. 2. Turning on lathe. 3. Elimination of undecorated zones by scooping and bringing out the decorated part in light relief. 4. In certain plaques the classical formula of a very much accentuated relief as in wood work is followed. 5. In some plaques the contour is lightly incised and the zone to be decorated is lightly scooped and resulting in relief and reverse. 6. On certain bands the decoration has been engraved with a style. 7. The plaques and bands show traces of painting in which red pre-dominates. Black was used at times to accentuate the contours of the figures. The hair was also painted black and so also the pupils of the eyes.
V (4th century A.D. to 750 A.D.).	1. Traces of chisel marks on the reverse of a Buddha figure from Kashmir show that a piece of the required size was hewn and sawn out from the tusk and then it was levelled. 2. Carving may have been done by different types of chisels. 3. Colouring with lac. 4. Inlay work in ivory.
VI (751 A.D. to 1100 A.D.)	1. Carving may have been done by different types of chisels. 2. Traces of colour are found on the body, hair and the eyes of some specimen.
VII (1101 A.D. to 1500 A.D.).	1. Articles were turned on lathe. 2. Designs were obtained by incision. 3. Applique band was used on the bangle with the help of a pin or screw. 4. Inlay work on wood. 5. Use of paints.
VIII (1501 A.D. to 1800 A.D.).	1. Lacquering. 2. Inlaying with ivory and marquetry. 3. Veenering with ivory and application of pigments and also etching on the same. 4. Turning on lathe.
IX (1801 A.D. to 1900 A.D.).	1. Joining together of small pieces of ivory at each angle of octagon to make a box, while the top is carved from a solid piece. 2. Inlay work with ivory and straining with green and red.

Period	Technique
IX (1801 A.D. to 1900 A.D.) *—contd.*	3. Making of bangles on ordinary wooden lathe and colouring the same in deep red or covering the outside with thin sheets of gold or silver.
	4. Making of miniature painting on ivory.—First of all the ivory is sawn up into very thin plates and then polished. The painting is done on the polished surface and is protected by a very thick, but clear glass.
	5. Carving of other objects such as card-case, sandal-box, paper-knife, comb, etc. with the aid of files, chisels, knives, steel styles, etc.
	6. Colouring of ivory objects with lac.
	7. Weaving of ivory mats.

Technique and period:

From the statement furnished above, it is found that while certain techniques are found from the earliest period, some others are found only in later periods. For instance, decoration by incision, cutting of pieces by saw, turning on lathe, painting with colour are found even during Harappan period and have continued during later periods. For certain other techniques, for instance, use of applique band with the help of a pin or screw, inlay work with ivory, weaving in fine filaments of ivory are found only during later periods. In fact, weaving in fine filaments of ivory has been found only in 19th century.

Technique and centre:

The question of technique can be examined from another point of view to find out whether, if the time dimension is overlooked, certain techniques have remained concentrated to certain regions or whether they have wide spread. A statement indicating the techniques found in different centres overlooking the time dimension is furnished below:

Technique	Centres
1. Decoration by incision	1. Mohenjodaro 2. Harappa 3. Chirand 4. Rupar 5. Nagda 6. Taxila 7. Ujjain 8. Nagal 9. Chandraketugarh 10. Nevasa 11. Nagari 12. Dwaraka 13. Begram
2. Incised designs coloured or inlaid with coloured pigments.	Mohenjodaro
3. Cutting of awls from die.	Mohenjodaro
4. Making of ivory examples on lathe.	1. Harappa 2. Taxila 3. Dwaraka 4. Cambay 5. Bombay 6. Surat
5. Decoration by punching method and pin-holes.	1. Rupar 2. Prabhaspatan 3. Nagda 4. Ujjain 5. Chandraketugarh
6. Decoration with chequers and hachures.	1. Rupar 2. Taxila
7. Ivory works painted with colours.	1. Prabhaspatan 2. Begram 3. Orissa 4. Surat 5. Pali (Jodhpur) 6. Trichinopolly 7. Panjab
8. Carving and engraving of ivory objects with the help of chisels, styles, files etc.	1. Begram 2. Kashmir 3. Orissa 4. Delhi 5. Berhampur
9. Inlay work with ivory	1. Cambay 2. Vijaynagar 3. Bijapur

Technique	Centres
9. Inlay work with ivory —*contd.*	4. Jaipur
	5. Mysore
	6. Udaipur
	7. Bikaner
	8. Tatta
	9. Bombay
	10. Amritsar
	11. Travancore
	12. Vizagapatam
	13. Hosiarpur
10. Ivory works coloured with lac.	1. Kashmir
	2. South India
	3. Mysore
	4. Udaipur
	5. Pali (Jodhpur)
	6. Vizagapatam
11. Use of applique band on the bangle with the help of pin or screw.	1. Dwaraka
12. Beadstead of ivory inlaid with gold.	1. Vijaynagar
13. Mat weaving with ivory or weaving in fine filaments of ivory.	1. Sylhet
	2. Pali (Jodhpur)
	3. Tipperah
14. Painting on ivory	1. Delhi
	2. Trichinopolly

It is found from the above statement that certain techniques, for instance, decoration by incision, inlay work, painting etc., have been in existence in various regions at some period or other, but certain other techniques, for instance, inlaying incised designs on ivory wtih coloured pigments, cutting of awls from die, decoration with chequers and hachures, use of applique band on bangle with the help of a pin or a screw, are confined to only North and North-Western India.

Linked crafts:

As noted earlier, during later periods ivory pieces are frequently found to be inlaid on wooden structures and tortoise shell structures. In fact, these inlay specimens show very high level of skill and beauty. The linkage of ivory and fine wood work has perhaps been possible because many of the tools and techniques for both the crafts are identical. It is, however, to be noted that at no stage ivory craft has been entirely dependent on wood work or any other craft. There are good number of specimens which are made of ivory only and perhaps such specimens constitute the major portion of the ivory work.

Place of the craft in social complex:

It appears that since the earliest time ivory is a deluxe craft related to the needs of the higher classes of the society. It has always been found in urban and commercial centres and its industrial organisation is always related to urban manufacturers, financiers and patrons. Unlike many of the traditional crafts of India, it has never been part of the rural economic complex. Perhaps this more than anything else, explains why the craft gives a picture of alternating ebbs and tides, in its fortune in the different periods.

APPENDICES

APPENDIX I

Frequency of occurrence of craft objects at different periods as well as sites

Period	Material	Type of object	Description of representative specimens	Site where found	Source of information	Remarks
1	2	3	4	5	6	7
I. Harappan	Ivory	Jar-stopper	There can be no question that this object was used as the stopper of a narrow-mouthed jar. It is made of ivory and is 1.75 ins. long by 0.75 in in diameter at the wider, and 0.49 in. at the narrower end.	Mohenjodaro	1. Mackay, E.J.H., Further Excavations at Mohenjodaro, New Delhi, 1938, Vol. I, p. 434, Vol. II, pl. CIX-19. [Pl. I, fig. 1]	
Do.	Do.	Hair-pins	(*i*) Well-made and highly polished by use. Surmounted by the head of an animal like a dog. The grooves round the top of the shank were perhaps intended to keep the pin from slipping from the hair, Size : 2.6 ins. long and 0.21 in. in diameter.	Do.	1. *Ibid*, pp. 538-540, Vol. II, pl. CVII-8. [Pl. I, fig. 2]	
			(*ii*) Simply decorated on both sides with incised lines. Size : 4.4 ins. long ; 0.12 in. diameter ; flat top, 0.1 in. thick.	Do.	1. *Ibid*, pl. CXXXIX, 23. [Pl. I, fig. 3]	
			(*iii*) Greater part of pin missing. Incised lines decorate the head end, appear once to have been filled in with black. Size : 1.35 ins. long by 0.3 in. in diameter.	Do.	1. *Ibid*. pl. CVII-7. [Pl. I, fig. 4]	
			(*iv*) The two heads are apparently ducks' heads. This object may once have been considerably longer as the end of the shank appears to be broken. Decorated on the two border faces only with incised curved lines. Size : 1.75 ins. long by 0.6 in. wide and 0.15 in. thick.	Do.	1. *Ibid*, pl. CX-57.	
			(*v*) The thin end appears to have been either sawn or cut off. Incised line drawn in the middle of the head and stem on both sides. Only one of the birds' heads at the top has survived. Size : 2.1 ins. long ; stem, 0.21 × 0.11 in. in section.	Do.	1. *Ibid*, pl. CX-56. [Pl. I, fig. 5]	
			(*vi*) Incised curved lines on shank once filled in with black pigment. Two birds' heads at the top very conventionalised. Size 1.72 ins. long; Rectangular in section : 0.2 in. thick.	Do.	1. *Ibid*, pl. CX-57. [Pl. I, fig. 6]	
			(*vii*) Incised design of circles on both sides. Size : 2.05 ins. long by 0.21 in. thick.	Do.	1. *Ibid*, pl. CX-58. [Pl. II, fig. 1]	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
I. (*contd.*)	Ivory	Hair-pins	(*viii*) It is uncertain whether this was actually used as hair-ornament, but nothing else seems so likely. The bird on it seems to represent a duck, and pattern incised on the wider part of its shank was formerly filled in with black pigment. Size : 1.71 ins. long and 0.35 in. wide.	Mohenjodaro	1. *Ibid*, pl. CXXV-8. [Pl. II, fig. 2]	
Do.	Do.	Combs	(*i*) V-shaped ivory comb. Judging from its shape and the fineness of the teeth, it may have been used to remove vermin from long, lanky hair ; its shape certainly suggests that the hair upon which it was used was rope-like. It was very carefully made the teeth being cut with a saw and the roundness and polish of the angles of the former betoken considerable wear. This comb may be compared with the comb unearthed at Badari in Egypt. Size: 1.11 ins. long by 0.6 in. wide and 0.33 in. thick. (1)	Do.	1. Mackay, Vol. I, p. 541. Vol. II, pl. XCI-25. 2. Brunton and Caton-Thompson, Badarian Civilization, pl. XXIV, fig. 4. [Pl. II, fig. 3]	
			(*ii*) This ivory comb seems from its polish to have seen much use, and the teeth which were cut with a saw may originally have been very long. When perfect it must have resembled in shape the combs that are sometimes represented on the Mohenjodaro pottery. Size : 1.56 by 1.2 by 0.19 ins.	Do.	1. Mackay, Vol. I, p. 542, Vol. II, pl. XCI-26, See also pl. CXXV-24. [Pl. II, fig. 4]	
			(*iii*) The finest comb that has been found at Mohenjodaro upto the present. It is damaged, but none the less in a surprising state of preservation considering its delicate nature. Both sides are decorated in the same way with incised, concentric circles, and the teeth were cut with a saw whose blade appears to have been 0.02 in. thick. Size : 4.5 ins. long by 3.18 ins. broad and 0.2 in. thick.	Do.	1. *Ibid*, p. 542, pl. C-15. [Pl. II, fig. 5]	
Do.	Do.	Dice	(*i*) Square in section. Four sides all different—the dice of this group average 2.99 ins. in length. On three sides they bear one, two or three circular marks respectively, or only two sides are numbered ; the numbering most favoured being 1, 2 and 3. Two sides of one of the dices are, however, numbered six and eight respectively. A device very common on the fourth side of the die is a series of parallel longitudinal lines, or more rarely, curved lines arranged as in one of the dices.	Do.	1. *Ibid*, p. 561, pls. CXXXVIII, 41, 43, 48, CXLIII, 47, 49 and 51. [Pl. III, figs. 1 & 2]	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
I (*contd.*)	Ivory	Dice	(*ii*) Square in section ; three sides different. The dice of this type varies in length from 1.35 to 4.02 ins. Three of the sides are differently marked, and the fourth duplicates one of the other three ; for instance, two sides are marked two on one of the dices and two marked one on the other, though in the latter case the position of the mark is not the same. On one specimen two sides are marked three, though one of these sides is not drawn. Besides, one specimen has the numbers two and three denoted by small circles in the pattern at one end, the other half of each of these sides bearing a group of pictographic characters and crossed lines, respectively. On a third side there are two parallel longitudinal lines, and fourth side duplicates the last ride. The last one of this type has a rounded bluntly pointed end and it is possible that this die was twirled between the fingers before being thrown. The fourth side is a duplicate of the side marked with the smaller circles.	Mohenjodaro	1. *Ibid*, p. 561, pls. CXXV-9, 11; CXLIII-41, 43, 48, 54. [Pl. III, figs. 3 & 4 and pl. IV, figs. 1, 2, 3 & 4]	
			(*iii*) Square in section ; two sides similarly marked. The dice of this type which are rare have the same distinguishing marks on opposite sides, and it is possible that two were thrown at the same time. One of the dices of this group is rounded in the middle, where it is 0.21 in. in diameter, and it was perhaps twirled in the fingers like those of type (*ii*).	Do.	1. *Ibid*, pp. 561-562 pls. CXXVIII, 58, CXLI, 32; CXLIII-24. [Pl. V, fig. 1]	
			(*iv*) Triangular in section : three sides all different.	Do.	1. *Ibid*, pp. 561-62, pls. CXXXVIII, 44, CXLI-33 & CXLIII-50. [Pl. V, figs. 2 & 3]	
			(*v*) Triangular in section : two sides alike, the third different —these dices range from 1.36 to 3.9 ins. in length, and one side of one of them is convex instead of being flat.	Do.	1. *Ibid*, pp. 561-62, pls. CX-53, CXXXVIII, 45, 51 ; CXLI, 28, CXLIII, 37 & CX-55. [Pl. V, figs. 4 & 5 and pl. VI, figs. 1 & 2]	
Do.	Do.	Vessels	(*i*) Base portion or the top of a vase. It is 2.26 ins. in diameter and 1.04 ins. high, and there is a stepped vertical hole through it, part of which is 0.14 in. in diameter and the other part 0.35 in. If this object served as the base of a jar, the hole would have	Do.		

APPENDIX I—*contd.*

1	2	3	4	5	6	7
1 (*contd.*)	Ivory	Vessels	served to peg it to the body ; if the upper portion, as its bevelled edge leads us to think, the whole would have been the mouth of the jar, though one fails to see why in this case it had not the same diameter right through. On this piece of ivory was a geometric design of circular motifs carefully carved in low relief, each circle being made by three petals on the border surface of the objects and by four petals round the projecting piece. The latter device is commonly used on the pottery. Most of the petals still show traces of the light red pigment with which they were inlaid.	Mohenjodaro	1. *Ibid*, p. 324, pl. CXLII, Nos. 48 and 49. [Pl. VI, fig. 3]	
Do.	Do.	Awls and needles	(*i*) Square in section. This awl was trimmed down from an ivory stick that may have been used as a die, for though two of its sides bear the same pattern, namely, a row of small circles between a border line on either side. On the third side there is a row of larger circles without the lines, and on the fourth side three pictographic signs all of the same form, with large circles on each side of them. The point is abrupt and rather roughly cut. Size: 2.18 ins. long by 0.23 in.	Do.	1. *Ibid*, p. 421, pl. CV-11. [Pl. VI, fig. 4]	
			(*ii*) This awl also appears to have been cut from a die, on two sides of which there were rows of fine circles, with four circles on another side, and on the remaining side two simple lines that divide the red into three longitudinally. Point blunt and somewhat abrupt. Size: 2.25 ins. long; 0.28 × 0.25 in. in section.	Do.	1. *Ibid*, p. 421, pl. CV-12. [Pl. VI, fig. 5]	
Do.	Do.	Fish	(*i*) Flat model of fish decorated with incised marks which had been filled in with red and black pigment. Polished by constant use. Size : 3.7 ins. long by 0.49 in. wide by 0.28 in. thick.	Do.	1. *Ibid*, p. 564, pl. CXXXVIII-52. [Pl. VII, fig. 1]	
			(*ii*) Fish with eyes and fins incised and filled in with a coloured paste which is now light yellow. Size: 2.8 ins. long by 0.28 in. wide by 0.19 in. thick. No definite conclusion can yet be formed as to the use of these little flat models of fish.	Do.	1. *Ibid*, p. 564, pl. CXLIII-28. [Pl. VII, fig. 2]	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
I (*contd.*)	Ivory	Fish	That they were a part of some game seems likely, as they are only roughly shaped, the markings which are the same on both sides being crude attempts to copy those of the real fish.	Mohenjodaro		
Do.	Do.	Curious pieces of ivory shaped like a fish.	(*i*) One side of this piece of ivory is rounded and the other flat. The eye and scale markings are filled in with a red paint. Size: 2.58 inches long and 0.25 inch thick.	Do.	1. Mohenjodaro and the Indus Civilization: Sir John Marshall, Vol. II, 1931 (Chapter by E. Mackay) p. 557, Vol. III, pl. CXXXII-19. [Pl. VII, fig. 3]	
			(*ii*) It is rectangular in section with slightly rounded angles. Scale markings are filled in with red paint. Size : 2.58 inches long and 0.24 inch thick. These ivory pieces could hardly have been intended for use as amulets since they are not perforated in any way. Some very similar fish, also carved in ivory have been found in a royal burial at Nagadeh in Egypt, and may have been placed there as a food offering. There is no evidence, however, that these model fish were used for that purpose in ancient Sind.	Do.	1. *Ibid*, p. 557, pl. CXXXII, 20. [Pl. VII, fig. 4]	
Do.	Do.	Cubical gamesmen.	(*i*) Gamesmen bearing incised circular motifs ; The only use we can suggest for these carefully made ivory pieces is that they were gamesmen ; they could not have been used as dice, for all six sides bear identically the same device.	Do.	1. Mackay, *op. cit.* Vol. I, p. 573, Vol. II, pls. CXXXVIII, 55, 60 & CXLIII, 35. [Pl. VII, fig. 5 and pl. VIII, fig. 1]	
Do.	Do.	Battons	(*i*) This rod is extremely well finished, and the incised decoration at each end was once filled in with black paste. Possibly it served as a pin for a cloak, though it certainly seems rather large and heavy for this purpose. (Size : 7.8 ins. long by 0.9 in. in diameter at the wider end 0.44 in. at the other). Several tapering ivory battons have been found. They are attractively shaped and ornamented, but their purpose is quite unknown, and they may even have had more uses than one. Though these battons are all very carefully made and finished, there is little variety of decoration and they were evidently all made to one pattern, with the sole difference that one specimen only has a rounded top. It is probable that they were turned on a lathe.	Do.	1. *Ibid*, pp. 432-33, pl. CVI-42. [Pl. VIII, fig. 2]	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
I (*contd*)	Ivory	Rods	(*i*) This rod is plain and having square-cut ends. Shows a considerable amount of wear and is not exactly round. On one side is a group of three pictographic signs and on the other three figure of eight marks. Since the rod was drawn, we have found the missing end which was exactly the same as the other end and added nothing to the inscription. Size : 2.65 ins. long by 0.4 in. in diameter.	Mohenjodaro	1. *Ibid*, p. 563, pl. CX-45. (Pl. VIII, Fig. 3.)	
			(*ii*) This rod having ends square-cut and decorated with concentric circles. Bears pictographic marks. Size : 3.07 ins. long by 0.31 in. in diameter.	Do.	1. *Ibid*, p. 563, pl. CX-52. (Pl. VIII, fig. 4.)	
			(*iii*) Ends square-cut and plain. Tapers very slightly to one end. The incised bands seem to have been filled in originally with black paint. No inscription. Size : 2.82 ins. long by 0.4 in. in diameter.	Do.	1. *Ibid*, p. 563, pl. CXXXVIII-47. (Pl. VIII, fig. 5.)	
			Probably they were used in some form of game, though what that was we do not yet know.			
Do.	Do.	Roundels	(*i*) The side of this roundel is cross-hatched with incised lines that were once filled in with black. Size : 0.52 in. in diameter by 0.5 in. high.	Do.	1. *Ibid*, p. 439, pl. CIX-4. (Pl. IX, fig. 1.)	
			(*ii*) Somewhat warped and not now truly circular. Ornamented in the same way as the preceding one. Size : 0.7 and 0.6 in. in diameter at ends by 0.51 in. high.	Do.	1. *Ibid*, p. 439, pl. CIX-14. (Pl. IX, fig. 2.)	
			(*iii*) Similarly ornamented to the others. It differs from them, however, in having once had an attachment on the side, whose shape, we do not know. Size : 0.82 in. in diameter by 0.65 in. high.	Do.	1. *Ibid*, p. 439, pl. CIX-15. (Pl. IX, fig. 3.)	
			These three objects cannot have been gamesmen, for neither their flat tops nor bases show any polish through use, whereas their sides are well smoothed by constant handling. The possibility of their having been used as seals is also invalidated by the regularity of the decoration upon them which would have allowed of easy forging.			
Do.	Do.	Combs	Fragmentary comb with only one preserved tooth. Like the Mohenjodaro combs its body is ornamented with double incised circles. Size: length including tooth and handle, 3.8 in. Thick 0.2 in. Length of tooth 0.7 in.	Harappa	1. Vats, M.S., Excavations at Harappa, 1940, Vol. I, p. 459, Vol. II, pl. CXIX, No. 6.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
I (*contd.*)	Ivory	Goblet-shaped terminal	The terminal is flat at the top and pierced at the centre with a hole 0.3 in. in diameter and 0.85 in. deep. Ht. 1.5 in.	Harappa	1. *Ibid*, Vol. I, p. 459, Vol. II, pl. CXIX-No. 7.	
Do.	Do.	Cup	Part of an unguent (?) Cup with flat horizontal rim. It has been restored in plaster of Paris. Size : Diam. 2.5 in.	Do.	1. *Ibid*, Vol. I, p. 459, Vol. II, pl. CXIX-No. 2.	
Do.	Do.	Awl	Awl sharply pointed at the upper end and less so at the lower. Size : L. 3.4 in. ; diam. 0.4 in.	Do.	1. *Ibid*, Vol. I, p. 460, Vol. II, pl. CXIX, No. 25.	
Do.	Do.	Cylindrical gamesman	It is like one of the pieces used in the present day game of draughts. It is ornamented on both faces with seven double concentric circlets incised round one at the centre, and with a series of single circlets round the circumference, Diam. 1 in.	Do.	1. *Ibid*, Vol. I, p. 461, Vol. II, pl. CXIX, No. 55.	
Do.	Do.	Rod	Ivory rod with bird-like head. Size : L. 1½ in.	Do.	1. *Ibid*, Vol. I, p. 158, Vol. II, Pl. LXXVIII, No. 19.	
Do.	Do.	Handle	Long-necked, oval-shaped handle, flat on the underside, but otherwise rounded. In the top is a hole 0.2 in. in diameter which tappers down to 0.15 in. at the lower end. Size: L. 1.9 in.	Do.	1. *Ibid*, Vol. I, pp. 459-460, Vol. II, Pl. CXIX, No. 11.	
Do.	Do.	Kohl sticks	The Kohl sticks are generally cylindrical. Usually they tapper a little at both ends, which are fairly thick and rounded, but sometimes, only one end is finished, the other being left rough.	Do.	1. *Ibid*, Vol. I, p. 460, Vol. II, pl. CXIX, Nos. 13,15-16.	
Do.	Do.	Pillar-shaped piece	Concave pillar-shaped piece with flat ends. Round the shaft are two wavy patterns separated from each other by horizontal bands. At both ends, the piece is pierced with lathe holes, 0.4 in. in depth as well as in diameter. Ht. 1.8 in.	Do.	1. *Ibid*, Vol. I, p. 459, Vol. II, pl. CXIX, No. 9.	
Do.	Do.	Shaft	End of a lathe-turned shaft with flat base. The shaft is relieved with reel and beed motifs. It may be the handle of a copper mirror. Its present height is 1.9 ins. and maximum diameter 1 in.	Do.	1. *Ibid*, Vol. I, p. 459, Vol. II, pl. CXIX, No. 10.	
Do.	Do.	Cones	Fragmentary, but identical ivory cones with flat horizontal rim at the base. On the underside each of them has at the centre a rectangular vertical hole 1-1/8 × 3/8 in. reaching upto the apex, and this is bisected at right angles by a round hole bored through the body just above the rim. May have been used as *chauks* or conical ornaments for the head. Size : Ht. 1-3/4 in. and 1-9/16 in. diam. 2-7/16 in.	Do.	1. *Ibid*, Vol. I, pp. 116-117, Vol. II, pl. CXXXVIII, Nos. 24 & 25.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
I (*concld.*)	Ivory	Balusters	The balusters probably belonged to small caskets or miniature furniture. The uniformity of their ornaments on all sides is against their having been used as dice or for casting in any game of chance. There are a few balusters triangular in section. Their length varies from 0.95 to 2.1 in., the width of their sides is 0.4 in. The four-sided specimens, square in section, are both plain and decorated with bands. Some of them are segmented, each being divided into three sections by four bands. In one specimen there are three holes pierced through two sides. Their length varies between 2-4 and 2.38 in.	Harappa	1. *Ibid*, Vol. I, pp. 460-461, Vol. II, pl. CXIX, Nos. 3-5, 30-41, 43 and 45-54.	
Do.	Do.	Points of ivory	Points of ivory probably used as needles or styluses. Size: Approximately 4″ to 5½″ long.	Lothal (Saragwala), Distt. Ahmedabad, Gujarat.	1. Indian Archaeology, 1956-57—A Review, New Delhi, 1957, p. 16, Pl. XVI-B. (Pl. IX, fig. 4.)	
Do.	Do.	Comb	Comb with projecting teeth and rectangular in section. It may be noted that elephant's tusk has also been found at this site.	Kalibangan, Distt. Ganganagar, Rajasthan.	1. Information from Arch. Survey of India, Janpath, New Delhi.	
II. Post-Harappan	Do.	Dice	Dice decorated with circular floral motifs and incised circular bands.	Chirand, Distt. Saran, Bihar.	1. Indian Archaeology—1962-63—A Review, New Delhi, 1965, p. 6, pl. XIII-B.	
Do.	Do.	Arrowheads and styluses	—	Do.	1. *Ibid*, 1964-65, (Cyclostyle copy), 1965, p. 13.	
Do	Do.	Comb	—	Pandu-Rajar Dhibi, Distt. Burdwan, West Bengal.	1. *Ibid*, 1962-63, New Delhi, 1965, p. 43.	
III. (7th century B.C. to the end of 3rd cent. B.C.)	Do.	Stopper	Decorated stopper with incised lines and motifs including the lively figures of elephants.(2)	Rupar, 60 miles north of Ambala, Punjab.	1. Ancient India, No. 9, 1953, p. 132, fig. 4, No. 9, (period III). 2. Description by the Compiler. (Pl. IX, fig. 5).	
Do.	Do.	Caskets	Ivory caskets (dantasamudgaka)	Kapilavastu, (probably Piprawa in the north of the Basti Distt. U.P.)	1. Mahavastu, II, 420, see Dr. Motichandra's article on "Ancient Indian Ivories". Prince of Wales Museum Bulletin, No. 6, 1957-59, p. 8.	
Do	Do.	Hairpins	Four hair-pins with carved and decorated stops. They look like miniature rods with painted bottoms, excepting the fourth one which is of flat dimension and having the shape of a pointed arrow-head. Size : (*i*) 4 in. long (approx.) (*ii*) 3 in. long (approx.) (*iii*) 2½ in. long (approx.) (*iv*) 2½ in. long (approx.)(2).	Prabhas Patan, Distt. Sorath, Maharashtra.	1. Indian Archaeology, 1956-57—A Review, New Delhi, 1957, p. 17, pl. XVIII, B. 1—4. 2. Description by the Compiler. (Pl. IX, fig. 6.)	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
III (*contd.*)	Ivory	Hairpins	—	Rupar, 60 miles north of Ambala, Punjab.	1. Y. D. Sharma, "Past Patterns in living as unfolded at Rupar", Lalit-Kala, Nos. 1-2, (1956), p. 121.	
Do.	Do.	Do.	Mutilated hair-pin with incised lines and projecting teeth (broken) in the lower part. The semi-circular motifs on the six-horizontal lines forming the lower decorative part of the hair-pin is also decorated with a border of chained circular motifs. Size: 2-3/4″ × 2-3/4″. (2).	Nagda, Distt. Ujjain, Madhya Pradesh.	1. Indian Archaeology 1955-56—A Review, N. Delhi, 1956. pl. 14, pl. XXIV, B. 2. Description by the Compiler. (Pl. X, fig. 1.)	
Do.	Do.	Combs	—	Ujjain, Distt. Ujjain, Madhya Pradesh.	1. Indian Archaeology 1957-58,— A Review, New Delhi, 1958, p. 36.	
Do.	Do.	Do.	Hair combs with straight edge at top and sides slightly curved inwards. Decoration of incised circles between parallel beaded borders, which are also incised. The comb is unusually large and heavy, measuring 4.12 × 3.5 × 0.45 in.	Taxila, 20 miles north-west of Rawalpindi.	1. Taxila—by Sir John Marshall, Vol. II, pp. 655-56, 1951, Vol. III, pl. 199, No. 23. (Pl. X, fig. 2.)	
Do.	Do.	Do.	Combs decorated with concentric bands and circles.	Nagda, Distt. Ujjain, Madhya Pradesh.	1. Indian Archaeology, 1955-56, p. 14, Pl. XXIV-B. (Pl. X, fig. 3.)	
Do.	Do.	Do.	—	Rupar, 60 miles north of Ambala, Punjab.	1. Y. D. Sharma, "Past patterns in living as unfolded at Rupar" Lalitkala, Nos. 1-2 (1956), p. 121.	
Do.	Do.	Do.	—	Nagal, Distt. Broach, Gujarat.	1. Indian Archaeology, 1961-62—A Review, N. Delhi, 1964, pp. 11-12.	
Do.	Do.	Dice	—	Ujjain, Distt. Ujjain, Madhya-Pradesh.	1. Indian Archaeology, 1957-58, New Delhi, 1958, p. 36.	
Do.	Do.	Pots	Unguent pots affecting fantastic genii forms (*rochanapisachika*)	Kapilavastu probably Piprawa in Basti, U.P.	1. *Mahavastu*, II, 420.	
Do.	Do.	Awls and knitting needles	—	Ujjain, Madhya-Pradesh.	1. *Ibid*, 1956-57, New Delhi, 1957, pp. 27-28. 2. *Ibid*, 1957-58, New Delhi, 1958, p. 36.	
Do.	Do.	Bangles	—	Chandraketugarh, Distt. 24-Parganas, West Bengal.	1. Indian Archaeology, 1959-60—A Review, N. Delhi, 1960, p. 51.	
Do.	Do.	Do.	—	Nagal, Distt. Broach, Gujarat.	1. *Ibid*, 1961-62, New Delhi, 1964, pp. 11-12.	
Do.	Do.	Do.	—	Kapilavastu. (Probably Piprawa in the north of Basti Distt., U.P.)	1. *Mahavastu*, II, 420.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
III. (*contd.*)	Ivory	Pendant	Pendant in the form of a bust female figure with primitive characteristics. The figure is very simple in line and form bearing incised circular designs on its body. (2) Probably it was a child's toy. It is provided with a small hole near the top for suspension. Height 2.5 in. (3).	Taxila (ancient Takshasila), 20 miles north-west of Rawalpindi.	1. Ancient India, No. 9, 1953, "Explorations of Historical Sites" by Y. D. Sharma, p. 132, fig. 8, No. 5 (period I). 2. Description by the Compiler. 3. Taxila—by Sir John Marshall, Vol. II, 1951, pp. 654-655, Vol. III, pl. 199, No. 12. (Pl. X, fig. 4).	
Do.	Do.	Do.	Pendant in the form of highly stylised figure of the Mother Goddess with a stemmed cup-like head decorated with punched circles. The triangular lower part decorated like-wise, is very interesting.	Rupar, 60 miles north of Ambala, Punjab.	1. Ancient India, No. 9, 1953, *op. cit.* p. 124, fig. 4, No. 11 (period III). (Pl. XI, fig. 1).	
Do.	Do.	Do.	Two pendants in the forms of highly stylised figures of the Mother Goddess decorated with incised motifs and punched circles. Size: (1) height: approx. 2-1/2 in. (2).	Nagda, Distt. Ujjain, Madhya Pradesh.	1. Indian Archaeology, 1955-56—A Review, N. Delhi, 1956, p. 14, pl. XXIV-B. 2. Description by the Compiler. (Pl. XI, fig. 2)	
Do.	Do.	Do.	Pendant resembling a female figure probably the Mother Goddess. The figure with a triangular head and decorated with incised lines and punched circular motifs looks exactly like the one found at Nagda. The Punched circles with pin-holes in the Centre are meant for indicating eyes, nostrils, breasts and other parts of the body. The figure is abstract in composition and having suggestive details which are of primitive nature. Size : Height. 2" (2).	Prabhaspatan, Distt. Sorath, Maharashtra.	1. Indian Archaeology, 1956-57—A Review, New Delhi, 1957, p. 17, pl. XVIII-B-5. 2. Description by the compiler. (Pl. XI, fig. 3).	
Do.	Do.	Do.	Pendant in the form of Mother Goddess decorated with punched circles. It exactly looks like those found at Nagda and Prabhaspatan respectively.	Ujjain, Distt. Ujjain, Madhya Pradesh.	1. Indian Archaeology, 1956-57, p. 27, pl. XXXIII-A.7. 2. Description by the Compiler. (Pl. XI, fig. 4).	
Do.	Do.	Figure	Crude standing figure of a man in the round, probably a doll. The man wears a long tunic with a band above the waist and a necklace. Through the body from shoulder to shoulder there is a hole for the attachment of movable arms ; and another tiny hole from the back to the front of the shoulder, for the same purpose. Height : 2.75 in.	Bhir Mound, Taxila, 20 miles north-west of Rawalpindi.	1. Taxila—by Sir John Marshall, Vol. II, 1951, p. 666, Vol. III, pl. 203, No. 221. (Pl. XII, fig. 1).	
Do.	Do.	Do.	A small Mother Goddess in ivory.	Awra, Distt. Mandasor, Madhya Pradesh.	1. Indian Archaeology, 1959-60—A Review, New Delhi, 1960, p. 24.	
Do.	Do.	Do.	Figures of Mother Goddesses.	Kayatha, Distt. Ujjain, Madhya Pradesh.	1. *Ibid*, 1964-65 (Cyclostyle copy), New Delhi, 1965, p. 33.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
III (*contd.*)	Ivory	Ear-reels.	Ear-reels—some are solid and others pierced with a hole at the Centre. For example, the following ones deserve special mention : (*i*) Ear-reel with one side convex and hole through centre, by which the reel may have been suspended on a cord. Diam. 0.93 in. (*ii*) Similar, well turned on the lathe. One side slightly concave and decorated with incised concentric circles round a central projection. Diam. 1 in.	Bhir mound (Taxila).	1. Taxila—by Sir John Marshall, Vol. II, 1951, pp. 653-654, Vol. III, pl. 199, Nos. 5 & 6. (Pl. XII, fig. 2).	
Do.	Do.	Ear-ornaments.	Ear-ornaments in the form of dices of ivory.	Ujjain, Distt. Ujjain, Madhya Pradesh.	1. Indian Archaeology, 1956-57—A Review, New Delhi, 1957, pp. 27-28.	
Do.	Do.	Beds, Bed legs and lions.	Ivory bed-legs (*dantapadamaya*) and lions (*simhaka*) which word may also denote lion-shaped bed legs.	Kapilavastu, (Probably Piprawa in Basti Distt. U.P.)	1. *Mahavastu*, II, 420, *see* also Dr. Moti Chandra, *op cit.* Prince of Wales Museum Bulletin, No. 6, 1957-59, p. 8.	
Do.	Do.	Mirror handle	—	Ujjain, Distt. Ujjain, Madhya Pradesh.	1. Indian Archaeology, 1957-58—A Review, New Delhi, 1958, p. 36.	
Do.	Do.	Collyrium or Kohl sticks.	Collyrium sticks known as *amjaniya*.	Kapilavastu, (Probably Piprawa in the north of the Basti Distt. U. P.)	1. *Mahavastu*, II, 420, *see* also Dr. Moti Chandra *op. cit.*, Prince of Wales Museum, Bulletin No. 6, 1957-59, p. 8.	
Do.	Do.	Handle	A beautiful spout-like ivory handle decorated with chequers and hachures. This shows a definite advancement in the technique of ivory carving. Length : 4.2 ins.	Rupar, Distt. Ambala, Punjab.	1. Y. D. Sharma, "Past patterns in living as unfolded at Rupar" Lalit Kala Nos. 1-2 (1956), p. 121, pl. XLVI, fig. 16. (Pl. XII, fig. 3).	
Do.	Do.	Antimony rods.	—	Ujjain, Distt. Ujjain, Madhya Pradesh.	1. Indian Archaeology, 1956-57—A Review, New Delhi, 1957, pp. 27-28.	
Do.	Do.	Do.	—	Chandraketugarh, Distt. 24-Parganas, West Bengal.	1. *Ibid*, 1957-58, New Delhi, 1958, p. 51.	
Do.	Do.	Ivory work	One of the centres of ivory work was at Benares. This industry was located in a particular portion of the city which was known as the ivory-worker's street (*Danta-kara-vithi*). It is also mentioned that ivory-merchants of Benares were moving to Ujjain (4).	Benares, Uttar Pradesh.	1. *Kasava Jatakas*, 221. 2. *Silavannaga-Jataka*, No. 72. 3. *Guttila Jataka*, 243. 4. Economic Life and Progress in Ancient India—by N. C. Bandyopadhyaya, 2nd Edition, University of Calcutta, 1945, p. 245.	
Do.	Do.	Arrow heads	Socketed arrow-heads of ivory.	Sonpur, Distt. Gaya, Bihar.	1. Indian Archaeology, 1959-60—A Review, New Delhi, 1960, p. 14.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
III (*concld.*)	Ivory	Seal	A small ivory seal inscribed with the word *Bhadapalakasa* in Mauryan *Brahmi* characters.	Rupar, Distt. Ambala, Punjab.	1. Indian Archaeology, 1953-54—A Review, New Delhi, 1954, p. 6.	
Do.	Do.	Do.	Two ivory seals inscribed in early *Brahmi* characters and the other one marked with Ujjain symbol and bearing inscription "*gotha-jasatisakasa.*"	Ujjain, Distt. Ujjain, Madhya Pradesh.	1. Indian Archaeology, 1956-57, pp. 27-28. 2. Indian Archaeology, 1957-58, p. 36.	
V. 2nd century B.C. to the end of 3rd cent. A.D.	Do.	Hair-pins	Hair-pin of ivory with head in form of inverted bell capital and incised rings below.	Sirkap (Taxila) 20 miles north west of Rawalpindi.	1. Taxila—by Sir John Marshall, Vol. II, 1951, p. 656, Vol. III, pl. 199, No. 28. (Pl. XII, fig. 4).	
Do.	Do.	Do.	Description same as noted in the relevant portion of period III.	Nagda, Distt. Ujjain, Madhya Pradesh.	1. Indian Archaeology, 1955-56,—A Review, New Delhi, 1956, p. 14.	
Do.	Do.	Do.	Same as noted in the relevant portion of period III.	Prabhas Patan, Distt. Sorath, Maharashtra.	1. *Ibid*, 1956-57, New Delhi, 1957, p. 17.	
Do.	Do.	Do.	—	Ujjain, Distt. Ujjain, Madhya Pradesh.	1. Indian Archaeology, 1957-58,—New Delhi, 1958, p. 36.	
Do.	Do.	Combs	Combs one of which consists of a half-elliptical ivory piece with a rectangular section and a slightly raised rim, and with 116 projecting teeth (broken) in the lower part. The piece is excellently carved on both sides. On one side appears the figure of a woman reclining on her right palm on a pillow with beaded borders. The face is damaged. The hair is tied with a fillet at the front and is made into a plait loosely coiled at the back. A three stringed necklace covers a part of the left breast and is partly hidden by the left arm. The forearms are adorned with bangles, while the left one is having seven of them indicated by incised lines. The upper part of the body is nude. Two natural folds of the skin are indicated in the Central portion of the body. The right leg is slightly bent backwards, while the left one is stretched practically straight. There are anklets on both legs. Near the head is seated a dwarfish male figure with folded legs, presumably a slave attendant. The other side of the comb is divided into four zones by three vertical lines. The left zone is occupied by a powncing lion. The second zone contains an ornamental design of an altar (?) or the front of a building (?). The third is occupied by a treading elephant, its trunk, head and body decorated with notches possibly representing trappings. The spaces in front of the trunk of the elephant, between its fore-legs and over its back are filled with rosettes. An inverted conch-shell occupies the fourth zone. Size : Approx. 5″ × 1-1/2″. (1)	Taxila (Sirkap), 20 miles north-west of Rawalpindi.	1. Ancient India, No. 4, July 1947—Jan. 1948, "Taxila (Sirkap) 1944-45" —by A. Ghosh, p. 79, pl. XX. 2. Description by the Compiler. 3. Ancient India, No. 9, 1953, *op. cit.* p. 132, fig. 8, No. 14 (period V) See also Taxila—by Sir John Marshall, Vol. III, 1951, pl. 199, No. 21. (Pl. XII, fig. 5).	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
IV. (*contd.*)	Ivory	Combs	Another comb recovered from period V (Scytho-Parthian-cir. 100 B.C.—A.D. 50) represents a couple (*Dampati*) talking to each other. The female figure having an elaborate coiffure and ear-rings is shown holding a flower-stalk by the right hand, while the male figure is represented in such a manner as if he is talking to his consort with some sort of seriousness. The scene is very realistic, and in line and form the figures appear to be the prototypes of miniature paintings. The object was probably used as a hair ornament (2).		(Pl. XIII, fig. 1.)	
Do.	Do.	Do.	—	Ujjain, Distt. Ujjain, Madhya Pradesh.	1. Indian Archaeology, 1957-58—A Review, New Delhi, 1958, p. 36. 2. *Ibid*, 1956-57, New Delhi, 1957, pp. 27-28.	
Do	Do.	Do.	Fragmentary comb with its top frame divided into two panels. In the first panel is seated a woman with a veiled coiffure, wearing a short *sari* with the right leg comfortably stretched. The second panel represents an amorous comple, the male figure wearing a turban and *dhoti*. His left hand encircles the female figure and in the right he holds what appears to be a cup. The woman has a round, sensuous face, an elaborate coiffure and somewhat heavily modelled haunches. She wears ear-rings, necklace, bracelets and a broad zone. There is no doubt that the seated couple represents a *mithuna*, a common motif in early Indian Art.	Malwa, Central India.	1. Ancient Indian Ivories —by Dr. Motichandra, Prince of Wales Museum Bulletin, No. 6, p. 21, pl. 4-b. (Pl. XIII, fig. 2).	
Do.	Do.	Do.	Three mutilated combs with incised circular motifs and lines which are meant for decorative purposes. Sometimes the circular motifs are represented to form floral designs or chained patterns. In the case of floral designs the larger circular motifs are displayed in the centre and the smaller ones are put around them ; while in the case of chained patterns the larger circular motifs are attached to the lower part of the chains consisting of three smaller circular motifs. Size : (i) Approx. 1-2/3" long. (ii) Approx. 1-1/2" long. (iii) Approx. 1-1/2" long. (2)	Nagal, Distt. Broach, Gujarat.	1. Indian Archaeology, 1961-62, New Delhi, 1964, p. 12, pl. XXVIII-B. 2. Description by the Compiler. (Pl. XIII, fig. 3).	
Do.	Do.	Die or gamesman.	Well-shapped die or gamesmen of ivory.	Rajghat, Distt. Varanasi, Uttar Pradesh.	1. Indian Archaeology, 1961-62—A Review, New Delhi, 1964, p. 58.	
Do.	Do.	Do.	—	Masaon, Distt. Ghazipur, Uttar Pradesh.	1. *Ibid*, 1964-65 (Cyclostyle copy), New Delhi, 1965, p. 77.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
IV (*contd.*)	Ivory	Dice	Oblong playing dice with 1 to 4 marked on sides. The marks consist of group of three circlets surrounded by two concentric circles. Bands of three circlets between two incised parallel lines on each side at ends. Length 3·87 ins.	Sirkap (Taxila), 20 miles north-west of Rawalpindi.	1. Taxila—by Sir John Marshall, Vol. II, 1951, p. 663, Vol. III, pl. 200, No. 97. (Pl. XIII, Fig. 4).	
Do.	Do.	Awls	—	Ujjain, Distt. Ujjain, Madhya Pradesh.	1. Indian Archaeology-1956-57—New Delhi, 1957, pp. 27-28.	
Do.	Do.	Do.	—	Chandraketugarh, Distt. 24-Parganas, West Bengal.	1. *Ibid*, 1959-60, New Delhi, 1960, p. 51.	
Do.	Do.	Bangles	Three bangles of oblong section and one of which is more than half-an-inch wide.	Sirkap (Taxila), 20 miles north-west of Rawalpindi.	1. Ancient India, No. 4, July 1947-Jan. 1948, *op. cit.* p. 80, pl. XXI, A-10.	
Do.	Do.	Armlets	—	Ujjain, Distt. Ujjain, Madhya Pradesh.	1. Indian Archaeology, 1956-57—A Review New Delhi, 1957, pp. 27-28.	
Do.	Do.	Bangles	—	Nagal, Distt. Broach, Gujarat.	1. Indian Archaeology—1961-62, New Delhi, 1964, p. 12.	
Do.	Do.	Pendant	Description same as noted in the relevant portion of period III.	Nagda, Distt. Ujjain, Madhya Pradesh.	1. *Ibid*, 1955-56, New Delhi, 1956, p. 14.	
Do.	Do.	Do.	Description same as noted in the relevant portion of period III.	Prabhas Patan, Distt. Sorath, Maharashtra.	1. *Ibid*, 1955-57, New Delhi, 1957, p. 17.	
Do.	Do.	Human Figure (Ritual)	Figure of *Sri-Lakshmi* with ovaloid face, large sunken eyes, prominent eyebrows, big nose, large sensual mouth pinched in a smile and short chin is out of proportion to the slim body. Around the head runs a twisted band with a resette in the centre. The hair is arranged in a triple plait tasseled at the ends. The coiffure is mounted with a floral *veni*. She wears bangles set off with bracelets and armlets. The lower left hand is holding an end of the rolled-up *patka*. The torso is flexed, the breasts well developed and the naval indicated by a deep cavity. The zone is beaded. The legs with prominent knee caps are broken a little below the knees. Attention may also be drawn to an ivory female figure of Indian origin from Pompeii in Italy. The Pompeii ivory, probably carved in the early years of the 1st century A.D. represents the Goddess *Sri* with which the ivory figure from Ter is closely related. Size : height 5".	Ter, 11 miles to the north-north-east of Osmanabad Distt. of Maharashtra.	1. Lalit Kala, No. 8, Oct. 1960, "An Ivory figure from Ter"—by Dr. Motichandra, pp. 7-14, pl. I. (Pl. XIV, fig. 1).	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
IV (*contd.*)	Ivory	Human Figure (Secular).	An interesting headless figure of a soldier. The lower part of the legs are also missing. He holds a sheathed broad-sword in the right hand and a semi-circular fringed shield in the left. He wears a light-fitting coat reaching to a little below the waist. Its flaps are crossed at the chest and pleated below the waist and secured with a simple waistband. The under-garment is also pleated and shows traces of a painted and pleated *Patka*, a common feature of the male costume of the sunga period. Size : 2″ × 3/4″ (3).	Pataliputra (Patna) Bihar.	1. *Ibid*, p. 7. 2. K. P. Jayaswal, "An Early Ivory", JISOA, IV (June 1936), p. 75. 3. Ancient Indian Ivories by Dr. Motichandra, Prince of Wales Museum Bulletin, 1957-59, No. 6, p. 20.	
Do.	Do.	Figure	Figure of elephant with a man and woman seated on it and a woman carried in the arms of a man, while another man leaning on a rod looks. The plaque probably represents the abduction of Vasavadatta by Udayana.	Kondapur, 43 miles west-north of Hyderabad, Andhra Pradesh	1. Ancient Indian Ivories—by Dr. Motichandra, *op. cit.* p. 21, pl. 2-c. (Pl. XIV, fig. 2).	
Do	Do.	Handle	Fragment of a handle (?) of plano-convex section, divided into zones by raised bands, the sides containing at least two mortices, the intervening space decorated by rosettes. (1) The intervening spaces in between the raised or deeply carved designs consisting of floral and creeper motifs : size : Approx. 5″ long (2).	Arikamedu, near Pondicherry, South India.	1. Ancient India, No. 2, July 1946, "Arikamedu : An Indo-Roman Trading Station on the East Coast of India"—by Dr. Wheeler, Sri Ghosh and Sri K. Deva, p. 108, pl. XXXVI-B. 2. Description by the Compiler. (Pl. XIV, fig. 3).	
			A long piece of ivory, elliptical in section, divided into zones with parallel incised lines. It looks like the part of a handle. Size : Approx. 3″ long.	Do.	1. Ancient India, No. 2, *op. cit.* p. 108, fig. 43, 7. (Pl. XIV, fig. 4).	
			Ivory handles	Nevasa, Distt. Ahmednagar, Maharashtra.	1. Indian Archaeology, 1960-61—A Review, New Delhi, 1961, p. 21.	
Do.	Do.	Sword-handle	Sword with the handles made of pure ivory *Suddhadantatsarumasin*. Bhagadatta, the King of Assam presented to Yudhisthira...... among other things, swords with the handles made of pure ivory. Pragjyotisa could well afford to present as many ivory handles as it liked as the kingdom was the home of elephants in ancient times as to-day. Ivory handles of the sword probably show that the ivory carver's art was highly developed in Assam at least two thousand years back. (2).	Pragjyotisa (Assam).	1. *Mahabharata*, II, 47, 14. 2. Geographical and Economic Studies in the Mahabharata : Upayana Parva—by Dr. Motichandra, Lucknow, 1945, p. 58.	
Do.	Do.	Mirror-handle	Mirror-handle of ivory, with single torus moulding resembling the handle of a Greek mirror from Bulandi Bagh at Patna, now in the Patna Museum. This is probably turned on lathe and decorated with mouldings and incised lines and hatching.	Taxila, 20 miles north-west of Rawalpindi.	1. Taxila—by Sir John Marshall, Vol. II, 1951, pp. 658-59, Vol. III, pl. 199, No. 56. (Pl. XV, fig. 1).	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
IV (*contd.*)	Ivory	Handle of fan or fly-whisk.	Handle of a fan or fly-whisk provided with a hole at the butt-end for suspension and three holes at the other end for attaching the fan or whisk. The fan was in daily use among the greeks, and the fly-whisk was also familiar to them, but either object may equally well have been Indian. Size : Length 10.43 in.	Sirkap (Taxila), 20 miles north-west of Rawalpindi.	1. Taxila—by Sir John Marshall, Vol. II, 1951, p. 658, Vol. III, pl. 200, No. 57. (Pl. XV, fig. 2)	
Do.	Do.	Antimony rods (Kohl sticks).	—	Rajghat, Distt. Varanasi, Uttar Pradesh.	1. Indian Archaeology 1964-65—A Review (cyclostyled copy), New Delhi, 1965, p. 82.	
Do.	Do.	Toy furniture or miniature chests.	(*i*) Rectangular side-piece of chest or table made of ivory and decorated with incised circlets on outer side. Seven peg-holes for fixing to legs and top. Size : 3.5×1.62 in.	Sirkap (Taxila), 20 miles north-west of Rawalpindi.	1. *Ibid*, Vol. II, pp. 663-664, Vol. III, pl. 204, Nos. 103-104.	
			(*ii*) Similar to preceding, but decorated with two rows of double concentric circlets between line-borders. Size : length 3.5 in.		Do. (Pl. XV, fig. 3)	
Do.	Do.	Dagger	The pierced ivory dagger probably used as a pendant ornament. The knobbed end would seem to indicate that it was sheathed. The end of the handle is trefoil.	Sankaran, in Vizagapatam, Distt.	1. Annual Report, Archaeological Survey of India, 1907-08, pp. 170-171, Pl. LIX, fig. 24. (Pl. XV, fig. 4)	
Do.	Do.	Knife	Ivory knife, wedge-shaped in section. The bottom portion is decorated with incised lines.	Taxila, 20 miles north-west of Rawalpindi.	1. Ancient India, No. 4, *op. cit.* pp. 80—87, pl. XXI, B, No. 21. (Pl. XVI, fig. 1)	
Do.	Do.	Discs	Two discs bearing incised circular motifs with pin-holes in the centre. Size (i) 1-2/3″ long, (ii) 1½″ long (2).	Chandraketugarh, Distt. 24-Parganas, West Bengal.	1. Indian Archaeology 1959-60—A Review, New Delhi, 1960, pl. LIV, 12 & 13. 2. Description by the Compiler. (Pl. XVI, fig. 2)	
Do.	Do.	Stick	Round cosmetic-stick with pointed but smooth ends. Size : Approx. 5½ in. long (2).	Do.	1. Indian Archaeology, 1959-60, *op. cit.* pp. 51-52, pl. LIV, 14. 2. Description by the Compiler.	
Do.	Do.	Ring	Ring of ivory. This has the appearance of a bangle, but seems rather to have been the base of a small pedestal, though made in a separate piece. The inner face of the ring is rough, only the outer face is smooth, size : Diam. 2·5″.	Sirkap (Taxila), 20 miles north-west of Rawalpindi.	1. Taxila—by Sir John. Marshall, Vol. II, 1951, p. 653, Vol. III, pl. 199, No. 3. (Pl. XVI, fig. 3)	
Do.	Do.	Bands and decorated plaques including panels.	During excavation 10 plaques and bands of ivory beautifully ornamented and decorated with human figures, were discovered. Besides, there were also found large ivory panels representing in high relief the figures of *Yekshis* or river Goddesses. The technique of the ornamentation of the bands and decorated plaques may be noted	Begram, the ancient *kapisa* (Mod. Kafiristan).	1. Ancient Indian Ivories by Dr. Moti Chandra, Prince of Wales Museum Bulletin, No. 6, 1957—59, pp. 31—36. 2. J. Hackin and M. J. Hackin, Recherches Archaeologiques a Begram, 2 Vols. Paris, 1939.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
IV (*contd.*)	Ivory	Bands and decorated plaques including panels. (*contd.*)	here. The bands are almost of the thickness of two millimetres, but the decorated plaques have a thickness of 10 to 12 mm. On certain bands the decoration has been engraved with a style. The aquatic birds appear in profile holding in their beaks a twig of *Asoka.* Their feathers are indicated by checks and lozenges and their bellies and tails are hachured lightly. The stylised rosettes above the birds are slightly hollowed. This simple expedient is repeated in a number of plaques. The tendency to scoop leaves and petals is at times accentuated. Certain variants in this method may be seen. In some scenes with human figures are shown with double lines. The variations in the technically yield the following interesting divergences : (a) the undecorated zones are eliminated by scooping with the result that the decorated part comes out in light relief. The transition from simple engraving with a style to flat relief by scooping and hollowing the non-decorated zones is represented in a piece, (b) The contour is lightly scooped and on this surface the craftsman did the relief work resulting in "relief in reverse." This technique reaches its perfection in the bigger plaques. The deeply incised contour yields a shading which admirably gives the effect of modelling. The anatomical details are rendered with a great virtuosity. The composite motifs on the borders give an excellent example of this technique. In certain plaques the classical formulae of a very much accentuated relief as in wood work is followed. The artist was not satisfied by chamfering this undecorated surface : he eliminated it. The plaques and bands show traces of painting in which red predominates; floral and animal designs on red ground are very effective. Black was used at times to accentuate the contours of the figures ; the hair was also painted black and so also the pupils of the eyes. No other colour seems to have been employed. The motifs of the Begram ivories, however, bear very close resemblance to the Kushana art of Mathura. Fully		3. J. Hackin & others, Nouvelles Richerches Archaeologiques a Begram, 2 Vols. Paris, 1954. [Pl. XVI, fig. 4; pl. XVII, figs. 1, 2, 3 & 4 ; pl. XVIII, figs. 1, 2, 3, 4 & 5; pl. XIX, figs. 1, 2, 3 & 4 ; pl. XX, figs. 1, 2, 3 & 4 and pl. XXI, figs. 1, 2, 3 & 4.]	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
IV (*contd.*)	Ivory	Bands and decorated plaques including panels.	developed sensual types of women are common to both. Like the women in the Kushana art of Mathura the women depicted in the Begram ivories wear a *chindamani*—a filletted circular medallion. Their nose is slightly curved, a feature also found at Mathura. The three *Yakshis* have *makara* vehicles and are also associated with geese as at Mathura. The treatment of the hair of one of them reminds us of Hellenistic influence. Their tunics are also not Indian. The eel-legged figure of Begram and Mathura with a *makara* or a leograph on either side is of Western Asiatic origin. Similarly the figures of flying birds or geese at times carrying twigs of the *Asoka* tree are common to both. As regards the winged monsters at Begram, while the points of contact with Sanchi and Mathura are clear, in one particular they differ from Mathura ; their foreparts rest and the hind parts are lifted. This is found in one band from Begram. Here the monsters with human, *makara* or griffin faces have their bodies unduly stretched. This mannerism is rarely seen at Mathura, but is frequent at Amaravati. The elongation of zoomorphic figure is also a characteristic of Scythian art. Though the Begram ivories are interesting from the technical view point, the physical types are also remarkable ; the nose is short and arched, and the eyes are not so elongated. The naked body shows a purely Indian grace. The anatonical details are represented with a sense of realism devoid of vulgarity. The round effect is not bloated, but shows all the shades. Women are diversely clad here in a *sari* there in a tunic. Those wearing tunics have their hair dressed in Greek fashion, and in the treatment of their drapery western influences are apparent. The borders are equally interesting. The composite figures at intervals carrying the scrolls remind us of the *Yakshas* and animals which play the same role at Sanchi, Mathura, Amaravati, etc. This was a common motif in the Kushana period. According to Hackin, the style is primitive. Fixed to the surface it refused evasion and did	Begram		

APPENDIX I—*contd.*

1	2	3	4	5	6	7
IV (*contd.*)	Ivory	Bands and decorated plaques including panels.	not suggest any relief. The female types are heavy and awkward with large heads and small jambs, which do not conform to the ideal Indian Conception of the human body. If, however, the human figures are heavy the bird and animal figures—fighting cocks, flying ducks, lapwings and leographs show a remarkable quality of observation and firmness of hand. There are, however, certain female figures the contour of whose body is marked by a double line. The physical type here is less massive and more graceful, which shows a departure from the accepted technique of composition. In the excavation of 1939 some large plaques (height 35 cms) were obtained. In a plaque certain details and decoration recall to mind some Ancient Indian monuments, particularly gateways *torana* and the elephant appearing in the zone between the bands, bearing comparison with the elephant frieze in the Lomas Rishi cave in Gaya. One plaque reproduces a gateway recalling the gateway of Sanchi and Mathura. In Begram ivories the majority of the subjects deal with the various activities in the palace, while the female guards and door-keepers keep watch, their mistresses are showing adorning themselves with the help of mirrors, reclining on the bed or seated in *asoka* groves. The maid-servants help them in their toilet and also bring to them spice-boxes, pots of pomade, jewels, in addition to fanning them. The female musicians perform before them, while attendant dwarfs flit in the background. The royal ladies are also shown enjoying delicacies in the company of attendants and their pets such as ducks, parrots and geese. They are also shown plucking at the *asoka* bough or playing at ball or swinging. The young mothers play with their children and suckle them as they walk. The figures wear varied costumes. A king wears the usual *dhoti* and turban, while men of lesser social status wear seven garments. Thus hunters and horsemen wear close-fitting double-breasted, full-sleeved coats and light breeches, while the equerries wear breeches, coats and bonnets. Women	Begram		

APPENDIX I—*contd.*

1	2	3	4	5	6	7
IV (*concld.*)	Ivory	Bands and decorated plaques including panels.	wear long striped *Saris*, jewels, headdresses, embellished with pins and *asoka* twigs. The ivories also give details of architecture, the *toranas* have one to three architraves and are provided with door leaves and central catches, handles and knockers and pinbolts. In arched doors the side columns have sculptured capitals assembled with stylised hoops and connected to the porches with latticed windows. The *harem* was a vaulted structure provided with two-storeyed pavilions and two arched doors. The furniture consists of various kinds of stools, beds, cushion, wickerwork, brackets, tables, etc. In the vessels appear bowls, ewers, squate jars, etc. (1).	Begram		
Do.	Do.	Do.	A unique ivory seal incised with several Buddhist symbols like the *triratna*, *svastika* and twin fish.	Nevasa, Distt. Ahmednagar, Maharashtra.	1. Indian Archaeology 1955-56—A Review, New Delhi, p. 11.	
Do.	Do.	Do.	An ivory seal incised with *svastika* and taurine symbols.	Nevasa, Distt. Ahmednagar, Maharashtra.	1. *Ibid*, 1962-63, New Delhi, 1965, p. 19.	
Do.	Do.	Do.	Inscribed seal showing traces of a *stupa* with railings in the Amravati style. The four letters inscribed below the *stupa* and the railings probably contain the name of a chieftain or the head pontiff connected with the *stupa* at Amaravati.	Dharanikota, Distt. Guntur, Andhra Pradesh.	1. *Ibid*. 1964-65 (cyclostyled copy), 1965, p. 5.	
Do.	Do.	Ivory works including carvings.	According to Periplus, the region of Dasarna (Dasarna—South-east Vindhyas) yields the ivory known as Dosarenic. (6) The Sanchi inscription states that one of the piers of the southern Gateway was executed and dedicated by ivory carvers of Bhilsa. It is thus apparent that they were already organised as a guild, and worked in stone as well as ivory. (3) It is stated that ivory was used for making hair-combs, dice, and other small as well as ornamental sword hilts, armour and the like (2).	1. Dasarna (Eastern Malwa), Madhya Pradesh. (1) 2. Vidisa (Bhilsa) the capital of East Malwa, Modern Besnagar, Madhya Pradesh (2&3). 3. Ayodhya, Uttar Pradesh (5&6). 4. Mysore (2&6). 5. Dantapura (probably Dantan on the Kansai in Midnapore Distt., West Bengal.) (6).	1. The Periplus of the Erythraean Sea, Secs. 56&62. 2. A Comprehensive History of India, Vol. II, edited by K.A.N. Sastri, 1956, pp. 432-433. 3. The Arts and Crafts of India & Ceylon, A.K. Coomaraswamy, 1913, Chap. VII, p. 175. 4. Lalit kala, No. 8, Oct., 1960, *op. cit.* p. 7. 5. Ramayana II, 83, 12. 6. Social and Rural Economy of Northern India, Cir. 600 B.C.-200 A.D.—by Atindranath Bose, Vol. II, Calcutta, 1945, pp. 212-213.	
V. Beginning of the 4th Century A.D.—750 A.D.	Do.	Figure representing Hanuman.	The figure, half human, half monkey, is armless; the right leg is broken above the knee, the left leg at the ankles. Diagonal markings on the head, body, and legs suggest hair. The figure is nude except for a girdle of lotus leaf palmettes around the hip. Size : Height : 7¼" (2)	Findspot not known.	1. The Art of Greater India, Los Angeles 1950, p. 45, fig. 43. 2. Ancient Indian Ivories—by Dr. Moti Chandra, Prince of Wales Museum Bulletin, No. 6, 1957—59, p. 37.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
V (*contd.*)	Ivory	Figure representing *Buddha*.	Figure of *Buddha* with his attendants (carved separately) the central piece is roughly rectangular in shape with tapering sides. Traces of chisel marks on the reverse show that a piece of the required size was hewn and sawn out from the tusk and then it was levelled. The figure of the *Buddha* is carved in deep relief, almost in the round. His *ushnisha* touches the centre of the top arch, and the schematic curls arched on both sides of the forehead cover the head and reach down to the ears. The ears have the usual distended lobes. The face is evaloid with full cheeks, painted nose, arched eyebrows and *urna* in the centre of the forehead. The eyes are fish-shaped and half-closed. The small mouth has bow-shaped full lips painted red and a fleshy chin. The neck has a triple fold. The expression on the face is of beautiful meditation. The Buddha is shown seated in *padmasana* in *dhyanamudra*. On the top, hovering over the *Buddha's* head on either side is a pair of *Sidhas* and below them two *Yakshas* with grinning faces. On the extremes are two *Maharajas*, below them appear *Yakshas* with flower baskets and lower down aappear more *Maharajas*, while at the bottom are again two *Yakshas*. The *Bodhisattva* on the left (carved separately) stands with his hands interlocked in *dharmachakra* or *anjalimudra*. The hairlocks, arranged in ringlets, are lacquered black and fall on the shoulders. The evaloid face with arched eyebrows, aquiline nose and open, slightly distended lips has a noble smile. These together with the carefully modelled chest show the admirable skill of the artist. The *Bodhisattva* wears a three pointed crown decorated with pearl strings, a circular ear-ring in the left ear and a rosette shaped ear-ring in the right ear, a necklace, the sacred thread (*yajnopavita*) armlets and bracelets. An elaborate (*Vanamala*) reaches the anklets. To his left kneels an attendant holding a flower tray and to his right stands a *chauri*—bearer. Near the left shoulder there appears another *chauri*-bearer. The *Bodhisattva* on the right is almost an exact replica of his counterpart on the left.	Kashmir	1. *Ibid*, pp. 33-44, pl. 6. (Pl. XXII, fig. 1).	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
V (*contd.*)	Ivory	Figure representing Avalokitesvara.	The ivory figure of *Avalokitesvara*, in his *Lokanatha* form (ht. 14·4 cms.) carved almost in the round. The top portion of the tusk was cut and hewn in such a manner that its concavity was maintained. The carver left the reverse polished but unfinished. The figure is in *tribhanga* pose. The hair, lacquered black, is arranged in a mitre-shaped crown with stylised locks in ringlets falling over the shoulders. In the centre of the crown appears the seated image of Amitabha with legs crossed in *Dhyanamudra*. The full evaloid face of the *Bodhisattva* is unfortunately damaged, but the fish-like eyes and well-modelled chin point to the high plastic quality. The eyebrows and other details of eyes were also accentuated with black. Traces of red have also survived on the lips. The neck is marked with the conventional triple line and the broad chest is well-modelled. The left hand with open palm, the fingers of which are damaged, is bent on the chest and holds an open lotus with long sinuous stalk. The right hand is stretched in *varadamudra*, the long fingers being very sensitively carved. To the left kneel a devotee with folded hands, wearing a three-pointed crown, ear-rings, a necklace, bracelets, *dupatta* and *dhoti*. The standing figure on the right with folded hands seems to be an acolyte. He wears a *dhoti* and a *chadar* passed across the chest. He does not wear ornaments. *Lokanatha* wears rich ornaments and dress. Two small necklaces and the central tiger-claw indicating the youthfulness of the *Badhisattva* adorn the neck. An elaborate *Vanamala* almost reaches the ankles. The armlets are made of looped strands of pearls ; the bracelets are beaded. There can be little doubt that this ivory example is the work of the same artist who carved the figure of the *Buddha* described above.	Kashmir	1. *Ibid*, pp. 45-46, pl 10b. (Pl. XXII, fig. 2)	
Do.	Do.	Rings	The list of presents to Harsa from Bhaskarvarman as described by the court poet Bana includes among other jewellery and ornaments, rings of ivory encrusted with rows of huge pearls from the brows of elephants. (1)	Assam	1. A Cultural history of Assam (Early period), Vol. I, by B. K. Barua, 1951, p. 95. 2. *Harshacharita* (Hindi), V. S. Agrawala, Patna, 1953, p. 170.	
Do.	Do.	Game pieces		Masaon, Distt. Ghazipur, U.P.	1. Indian Archaeology 1964-65—A Review, (Cyclostyled copy), 1965, p. 77.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
V (*concld.*)	Ivory	Casket	Fragment of a carved ivory object, probably a casket.	Chandraketugarh, Distt. 24-Parganas, West Bengal.	1. *Ibid*, 1958-59—A Review, New Delhi, 1959, p. 56.	
Do.	Do.	Seal	Ivory seal inscribed in characters of the 4th-5th centuries A.D.	Maheth, Distt. Bahraich, Uttar Pradesh.	1. Ancient India, No. 9, 1953, p. 145.	
VI. 751 A.D.-1100 A.D.	Do.	Bangle	Circular bangle with incised lines on the body.	Rupar, 60 miles north of Ambala, Punjab.	1. Ancient India, No. 9, 1953, *op. cit.*, p. 124, fig. 4, No. 4, (period V). (Pl. XXII, fig. 3).	
Do.	Do.	Do.	Fragments of bangles of ivory	Indragarh, Distt. Mandasor, about 3 miles north-west of Bhanpura.	1. Indian Archaeology 1958-59—A Review, New Delhi, 1959, p. 28.	
Do.	Do.	Do.	Fragments of bangles of ivory, rectangular in section.	Hastinapura, Mawana Tehsil, Distt. Meerut, Uttar Pradesh.	1. Ancient India, Nos. 10 & 11, 1954 & 1955, "Excavations at Hastinapura and other Explorations in the Upper Ganga and Sutlej Basins 1950-52"—by B. B. Lal, p. 91, pl. LIII No. 13. (Pl. XXII, fig. 4).	
Do.	Do.	Figure popularly known as Charlemagne Chessman	Interesting piece of ivory which is said to have formed one of the pieces in a set of chessmen sent as a present to Charlemagne by Harun-ur-Rashid. This set was preserved amongst the treasures of the Abbey of St. Denis, but at the time of the French Revolution there existed only the unique piece which is noted here. It has since formed one of the remarkable ornaments of the Cabinet of Medals of the Bibliotheque Nationale. The object shows a king seated on a semi-circular *howdah*, the exterior of which is carved with the figures of eight soldiers under arches carrying straight swords and circular shields. They wear tight-fitting shorts. The King wears a flat turban of *Dillivala* type or a scarf and a necklace, armlets, bracelets and anklets. The elephant, which is heavily armoured, has caught a cavalryman in its trunk and the elephant-driver has just fallen off from his perch either by the jolt or has slipped off his seat to rescue the rider from peril. There are two riders on either side. One of these, on the right side of the King, carries a slightly curved sword and a circular shield and the other carries a battle-axe and a straight-sheathed	Findspot not exactly known.	1. "Some old Indian Ivories"—by Ajit Ghose, Rupam, No. 32, (1927), pp. 123-124, pls. A-D. 2. Ancient Indian Ivories—by Dr. Motichandra, Prince of Wales Museum Bulletin, No. 6, 1957-59, pp. 51-52. (Pl. XXIII, figs. 1, 2, 3 & 4).	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
VI (*contd.*)	Ivory	Figure popularly known as Charlemagne Chessman.	sword attached to a strap. The soldiers on the left of the King carry naked swords and circular shields. The base is decorated with a double row of beading. There is an Arabic inscription on the base—the purpose of which is not clear. It is difficult to say whether some Arab ivory-carver working in Indian style put his name on the ivory or whether its Arab owner got his name inscribed there. (2).			
Do.	Do.	Figure representing *Bodhisattva.*	The figure representing *Bodhisattva* is shown in a slightly *tribhanga* pose. The modelled chest is broad, the naval deep and the legs show the curvature of flesh. Traces of colour on the body, the hair and the eyes are quite evident. The Bodhisattva wears rosette-shaped ear-rings, a short beaded necklace, armlets and *Vanamala* reaching below the knees. The *dhoti* does not completely cover the legs, but goes round the chest being longer on the right than on the left. (2).	Kashmir	1. "Indian Paintings in Western Tibetan Temples" by G. Tucoi, Artibus Asiae, VII (1937), pp. 202-203, fig. 15. 2. Ancient Indian Ivories—by Dr. Motichandra, Prince of Wales Museum Bulletin, *op. cit.* p. 47. (Pl. XXIV, fig. 1).	
Do.	Do.	Male figurine	The figure is curved in the round representing a beardless male with short hair. He wears ear-rings and a necklace and is dressed in a long tunic with long tight sleeves and secured to the waist with a girdle. His left arm is around the shoulders of a small female figure and his right is placed, palm upwards, on her breast. The female figure wears a long tunic and a short cloak at the back which is either furlined or embroidered round the edges. Her right hand is placed behind the left shoulder of the man and her hanging left hand carries a small wreath. Apparently the pair represents a *mithuna*, a common motif in Indian Art. (Size : height 3½", width 3/8" and depth ½") (2).	Do.	1. Ancient Khotan by Sir Aurel Stein, Vol. I, pp. 209, 222, Kh. 008; Vol. II, pl. XLVIII, Kh. 008. 2. Ancient Indian Ivories—by Dr. Motichandra, Prince of Wales Museum Bulletin, *op. cit.*, pp. 47-48. (Pl. XXIV, fig. 2).	
Do.	Do.	Three-tiered *stupa*	Three-tiered *stupa* with a modified cruci-form cross-section. The top is flat with a square-cut hole indicating the existence of a missing part. The piece, complete with columns, canopies, thrones, and niches, is adorned with fifty-six figures, sixteen of them in animal form, the rest being gods from the *Mahayana* pantheon. In the first zone or tier appear three *Buddha* figures. The second zone has three images.	Bengal, Bihar or Orissa.	1. "An Early Pala Ivory"—by Sherman Lee, JISOA XVII (1949), pp. 1-5, pls. I-II. 2. Ancient Indian Ivories—by Dr. Motichandra, Prince of Wales Museum Bulletin, *op. cit.* pp. 49-50. (Pl. XXIV figs. 3, 4 & 5).	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
VI (*concld.*)	Ivory	Three-tiered *stupa*	The third zone has three units : the corners supported by pot-bellied *yakshas* ; the centre with throne bases, lion thrones with two small dwarfs and lotus thrones with dancing dwarf supports, with two small lions above, the space between the centre and corner being deeply recessed, each containing an elephant head represented frontally. The four principal *Badhisattvas* hold a lotus flower in the left hands. The colour of the ivory varies from a rich deep brown to creamwhite. The small *Buddhas* probably represent either the seven *Manushi Buddhas* with *Maitreya* or the eight scenes from the life of *Sakyamuni*. In the second zone are represented *Visvapani, Tara, Avalokitesvara, Hayagriva, Sarasvati, Vajrapani,* and *Vajradhara* or *Manjusri.* The lowest zone represents the carnal or the material world supported by Yakshas in grotesque form. (2).	Bengal, Bihar or Orissa.		
VII (1101 A.D. —1500 A.D.)	Do.	Bangle · ·	Description : Same as noted in the relevant portion of period VI.	Hastinapura, Mawana Tehsil, Distt. Meerut, Uttar Pradesh.	1. Ancient India, Nos. 10 & 11, 1954 & 1955, B. B. Lal, *op. cit.* p. 91, pl. LIII, No. 13.	
Do.	Do.	Do.	Flat, rectangular section. Incised line in the centre with small holes meant for a pin or screw to hold an applique band, Dia. 88 mm.	Dwaraka, Distt. Jamnagar, Gujarat.	1. Ref. following, Z. D. Ansari & M. S. Mate, fig. 10, No. 167, p. 44.	
Do.	Do.	Amulet · ·	This is a rectangular piece with one end, rounded. It has a triangular section, in other words it is wedge-shaped. There is a hole near the rounded part, the other side is a sharp edge.	Dwaraka, Distt. Jamnagar, Gujarat.	1. Excavations at Dwaraka by Z. D. Ansari & M. S. Mate, Poona, 1966, fig. 9, No. 130, p. 41.	
Do.	Do.	Figure depicting an amorous couple.	The amorous couple are seated on a high-backed rectangular cot resting on a base decorated with a fringe of lanceolate pattern. The male partner, seated in *ardha-paryankasana*, has a round face, a large nose and a smiling mouth, full cheeks and a fat painted chin. He wears necklaces and bracelets. The female partner is seated comfortably with one hand around the neck of her lover, and the other resting in her lap. She wears ear-rings, a necklace, anklets and a diaphanous *sari* marked with parallel folds.	Orissa	1. Ancient Indian Ivories—by Dr. Motichandra, Prince of Wales Museum Bulletin, *op. cit.*, p. 60, pl. 11a. (Pl. XXV, fig. 1).	

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APPENDIX I—*contd.*

1	2	3	4	5	6	7
VII—*contd.*	Ivory	Figure showing a danseuse.	The dancer's head is bending to the right and the left hand holds delicately the sling which passed round the left ankle carrying a musical instrument which is now broken. The lean, ovaloid face has arched eyebrows ; two lines below each eyebrow indicate a painted decoration. The eyes are fish-shaped, the painted nose has broad nostrils, the thick lips are dilated and the sharp chin is well modelled. The well-modelled legs and flexed torso pulsate with the rhythm of the dance. The hair hanging in curly locks, is secured to the forehead with a jewelled *tiara* made up of square plaques and pendants. Two pearl necklaces hang between the breasts. A *vanamala* made of rosette plaques, hanging down the right knee, passes under the left thigh and then disappears. On her left hand she wears armlets and bracelets and finger-rings. Anklets adorn the feet. The stiff folds of the *uttariya* with palmate-shaped ends fall on either side. The rectangular base cut at both ends is in the form of a lotus. Size : height approx. 10 cms.	Chalukya work	1. Ancient Indian Ivories by Dr. Motichandra, Prince of Wales Museum Bulletin, *op. cit.*, p. 53, pl. 11b. (Pl. XXV, fig. 2).	
Do.	Do.	Throne leg	The ivory throne-leg representing a *Gajasimha* standing up on his hind legs, holding between his front paws the body of a demon warrior who is dangling up-side down held by his left leg in the monster's trunk. The *Gajasimha* is standing on a mountain, with animals such as elephants, an heraldic lion, antelopes, rhinoceros (?), a giant lizard and many other wild animals. Four hunters can be seen, two of them being bowmen, one of them shooting an arrow from his large bow. Lower down in the mountain is a cave in which squats a hermit. The *Gajasimha* is beautifully represented, full of life and vigour. Apart from the jewel-studded bracelets on each paw, he wears a pearl necklace to which a row of pendant bells has been attached. Discussing the symbolism of this ivory it has been suggested that the lion, which is interchangeable with the tiger in Indian Art, is the king of the beasts and symbolises the power of the sun and the royal authority. J. E. Van Lohuizen-de Leeuw has pointed out the closest similarity existing	Orissa	1. "Indian Ivories with Special reference to a Medieval Throne Leg from Orissa"—by J. E. Van Lohuizen-de-Leeuw, Arts Asiatique, VI (1959), pp. 195-217, fig. 3. 2. "Early Indian Ivory Carving"—by Stella Kramrisch, Philadelphia Museum of Art Bulletin, LIV, No. 261, 1959, pp. 56-66.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
VII—*concld.*	Ivory	Throne leg	between the *gajasimha* and also an elephant clutching the pot-bellied Sabara warrior as depicted in the 13th century Konarak sculpture and this ivory throne leg. She has also quoted in this connection the inscription of the *Jagannatha* temple at Puri recording the gift of eight ivory thrones to the deity by Purushottamadeva (1467-1497) which confirms the existence of an important school of ivory-carving in Post-mediaeval Orissa. (1) Size : (13-3/4 × 6·3/16× 5·3/16).	Orissa		
Do.	Do.	Inlaid Ivory work	Ivory work of very delicate nature "in inlaid work" as well as "in turned articles" such as bangles, chessmen, dice, chess-boards, swords, bed-steads and sword-hilts. (2) & (3).	Cambay (on the Gujarat Coast). Gujarat.	1. Duarte Barbosa, Vol. I, pp. 135-142. 2. Indian Historical Quarterly, Vol. XXIV, No. 2, 1948, "Commerce and Industry in the Pre-Mughal Period"—by J. N. Chowdhuri, pp. 127-128. 3. History of Gujarat—by Commisariat, p. 262.	
Do.	Do.	Lid	This is a complete specimen with a "*Padma*" or *cyma recta* outline. It has an elaborate funial having a miniature replica of the *amalaka* stone and a *Kalasa*. The lid would fit around the mouth of the container. Decoration consists of two incised rings and facets on the curved portion. Probably turned on a lathe.	Dwaraka, Distt. Jamnagar, Gujarat.	1. Excavations at Dwaraka—by Z. D. Ansari & M. S. Mate, Poona, 1966, No. 111, pl. VI-c.	
VIII (1501 A.D. —1800 A.D.)	Do.	Dice	—	Pataliputra (Patna), Bihar.	1. Indian Archaeology 1955-56—A Review, New Delhi, 1956, p. 23.	
Do.	Do.	Plaque showing dancing female figures	Ivory plaque showing group of women dancing. It is a work of rich taste and exquisite sensibility. It shows a profound feeling for form and expression and for graceful rhythmic motion. The floating draperies, the feeling for relief, the subtle line and contour, and the slender elegance of the figures highten the decorative effect. It is dream in ivory of the music of the dance.	Travancore	1. Some Old Indian Ivories—by Ajit Ghose, Rupam, No. 32, October, 1927, pp. 127-128, Pl. III, fig. 3. (Pl. XXV, fig. 3).	
Do.	Do.	Plaque showing Mary teaching the Jesus	These carvings were apparently executed by Indian Craftsmen under Portuguese patronage and inspiration.	Goa	1. *Ibid*, pp. 126-127, fig. K. (Pl. XXV, fig. 4).	
Do.	Do.	Figure representing *Gajalakshmi*	The goddess wearing a *mukuta*, necklaces, a breast-band and *sari* with one end tucked behind and secured with a waist-band is seated in *padmasana* on an expanded lotus the petals	Karnatak region.	1. Ancient Indian Ivories by Dr. Motichandra, *op. cit.*, Prince of Wales Museum Bulletin, pl. 17b. (Pl. XXVI, fig. 1.)	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
VIII—*contd.*	Ivory	Figure representing *Gajalakshmi*	of which cover the lunate-shaped base. Her right hand is broken and in the left hand she holds a lotus. On either side stands an elephant pouring water from pitcher held in its trunk. The cusped arch at the back has a *kirtimukha* in the centre.			
Do.	Do.	Figure of a man, a woman and a mother and child.	These are probably not chess-pieces. These pieces are crude in craftsmanship and possess little artistic merit. The costume worn by the male figure, a king or noble, arrests attention, for this kind of costume is exceedingly rare.	Lucknow or Benares, Uttar Pradesh.	1. Some Old Indian Ivories by Ajit Ghose, op. cit. p. 127, pl. II, figs. 1, 2 & 3. (Pl. XXVI, figs. 2, 3 & 4).	
Do.	Do.	*Makara* head	The *makara*-head of grotesque form probably served as a decoration to a palanquin rod. The nose is beaked and the wide open mouth with red lacquered gums, bare fangs and red lolling tongue increase the effect of grotesqueness. The round eyes, lacquered red and black, have serrated eyebrows. The inside of the ear is also lacquered. From the middle of the temple rises a tiered floral ridge, with floriated tufts on either side. Size: (height 12·4 cms).	South India	1. Ancient Indian Ivories by Dr. Motichandra, Prince of Wales Museum Bulletin, op. cit. pl. 17a. (Pl. XXVII, fig. 1).	
Do.	Do.	Casket	Small ivory casket rectangular in shape and painted green has four stepped legs one of which is broken. The receptacle is divided into arched niches, four in front and at the back and three at the sides with delicate columns decorated with flowers and leaves at the top. Except for the back of the box, each contains female dancers in pairs, separated from one another by a floral motif. They are invariably represented with round faces, pointed nose, large eyes, jutting chin and well developed breasts. One hand is taken over the head while the other is crossed over the chest in *gajahastamudra*. The braided plait hangs down the back. The arched niches at the back contain highly stylised lions, the two in the centre against green ground facing each other frontally, while the two at the sides look back over the shoulders with arched necks and are carved against a red ground. They have lifted one of their paws and are depicted with raised tail and lolling tongue. Jungle vegetation is suggested by floral sprays. Certain details show faint traces of having been gilded.	Vijaynagar (Mysore).	1. *Ibid*, pp. 61-62, pls. 12 & 13. (Pl. XXVII, figs. 2 & 3).	

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APPENDIX I—*contd.*

1	2	3	4	5	6	7
VIII (*Contd.*)	Ivory	Casket	The cusped arches containing the dancers and the lions are framed by a narrow band fitted with palmates hanging downward both at the bottom and the top except that the top band of the front portion has a row of stylised peacocks instead. This band forms part of the lid and not of the receptacle. The top of the lid is bordered on all four sides with rosette bands. The rest of the space is divided into three registers the top register being divided into ten cartouches, the central and bottom register into eight. In the top register beginning from the left, appear the ten *avataras* of *Vishnu*, *viz.* the four handed *Matsya*, *Kachchhapa*, *Varaha*, and *Nrisimha*; the two handed *Vamana*, *Rama*, *Parasurama*, *Buddha*; the four-handed *Krishna* seated in *lalitasana* and *Kalki* riding a horse. In the Central reregister we see *Venugopala* in the centre playing on a flute. The other cartouches contain figures of standing *gopis* with hair braided in a single plait. The central cartouche of the bottom register contains figures of *Rama* and Sita seated on a throne with *Hanumana* kneeling on the ground with folded hands. In the cartouches to the left appear *Bharata*, *Sugriva*, *Lakshmana*, and *Vasistha* seated on a stool; in the cartouches to the right appear an attendant with a fan, *Satrughna* holding an umbrella and two monkey chiefs with hands folded in adoration.	Vijaynagar (Mysore)		
Do.	Do.	Throne leg	The throne leg depicts an animated hunting scene. The hunter is mounted on a rearing charger, fully caparisoned, even the minutest details of the harness being carefully depicted. He wears a turban with beaded transverse band *pechi*, a full-sleeved mail-shirt, trausers and riding boots. The rider is equipped with a dagger stuck to the waist, a sword hanging in a sling, a bow across the shoulder and a spear in the right and left hands on each of which he has impaled a deer. He wears ear-rings, a pearl necklace, armlets, bracelets, finger rings and anklets. Below the rearing horseman is depicted a forest scene with a group of hunters engaged in hunting wild animals. The forest is represented by a single stylised tree and the crags of	Orissa	1. Ancient Indian Ivories—by Dr. Moti Chandra, Prince of Wales Museum Bulletin, *op. cit.*, pp. 56-57, pl. 14 (Pl. XXVIII, figs. 1 & 2).	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
VIII (*contd.*)	Ivory	Throne leg	the hill are seen under the belly of the horse. On the tree-top appears a monkey with upraised tail on either side, perhaps munching fruit. On the left side of the horseman, behind the right hind leg of the horse, is kneeling a turbaned hunter equipped with a sword and round shield. He has two daggers tucked to the zone and is followed by a dog. In-between the raised fore-legs of the horse is represented an animated hunting scene. A hunter is seen to have pierced the neck of a stag standing on its hind legs. A hunting dog has also attacked the animal and a huntress is ready to give it the final blow with a dagger. Under the left hind leg of the horse appear a wild boar and a hunter squatting on the ground.	Orissa		
Do.	Do.	Room of ivory	Paes (a Portuguese traveller), describes a room in the Vijaynagar palace. " In this house there is a room with pillars of carved stone; this room is all of ivory as well the chamber as the walls, from top to bottom, and the pillars of the cross timbers at the top had roses and flowers of lotuses all of ivory and all well executed, so that there could not be better,—it is so rich and beautiful that you would hardly find anywhere another such."	Vijaynagar (Mysore).	1. The Arts and Crafts of India and Ceylon—by A. K. Coomaraswamy, 1913, p. 175, Chapter VII.	
Do.	Do.	Bedstead inlaid with gold	Fernao Nuniz mentions a bedstead of ivory inlaid with gold which accompanied the king in his expeditions and was used by his son or daughter. (2).	Do.	1. A Forgotten Empire—by Robert Sewell, London, 1924, p. 370. 2. Ancient Indian Ivories by Dr. Motichandra, Prince of .Wales Museum Bulletin, *op. cit.* p. 61.	
Do.	Do.	Doorways inlaid with ivory	Inlaid doorways of the Ashar Mahall at Bijapur.	Ashar Mahall at Bijapur (Musulman).	1. The Arts and Crafts of India and Ceylon—by A. K. Coomaraswamy, *op. cit.* p. 176.	
Do.	Do.	Inlaid ivory door.	In old Amber there are walls panelled with sandal wood inlaid with ivory and silver. (2) Sir George Watt informs that certain doors (which date from 1630 A.D.) are inlaid with ivory and *sadeli* work (marquetry). (3).	Amber Palace, Jaipur, Rajasthan.	1. International Studio, Feb., 1925, p. 384. 2. Some Old Indian Ivories—Ajit Ghose, Rupam, No. 32, October, 1927, p. 125. 3. Indian Art at Delhi 1903—by Sir George Watt, Calcutta, p. 179.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
VIII (*contd.*)	Ivory	Settee backrest.	The settee back-rest may be described as a tympanum-shaped and perforated panel of inter-twined four footed and feathered dragons, of all shapes and sizes, richly carved, gilded, stained and lacquered. Underneath is a band of cuspedly arched panels each filled in by perforated ivories, depicting trees with birds on the boughs and animals resting beneath. The frames of the whole structure are elaborately veneered with ivory every portion of which has been engraved and loaded with pigment (most probably lac), the colours being, as with all modern Indian work, pale green and a delicate magenta. (2).	Mysore	1. The Arts and Crafts of India and Ceylon —by A. K. Coomaraswamy, *op. cit.* p. 180. 2. Indian Art at Delhi 1903—by Sir George Watt, Calcutta, p. 189, pl. No. 78. (Pl. XXVIII fig. 3).	—
Do.	Do.	Inlaid ivory work.	The doors of the *Bari Mahal* are overlaid with ivory that has been coloured with lac etchings. The gate of these doors has been given as 1711 A.D.	Udaipur, Rajasthan.	1. Indian Art at Delhi 1903—by Sir George Watt, *op. cit.* p. 180	
Do.	Do.	Do.	In the old palace of Bikaner there are certain doors richly inlaid and overlaid with ivory that very possibly are 18th century style of work.	Bikaner, Rajasthan.	1. *Ibid*, p. 180.	
Do.	Do.	Ivory work including bangle	—	Surat, Distt. Surat, Gujarat.	1. District Registrar, Co-operative Societies (*vide* R. G. Office file No. 12/14/63-SS).	
Do.	Do.	Ivory work	—	Darbhanga town, Distt. Darbhanga, Bihar.	1. District Industries Officer through S.C.O., Bihar (*vide* R. G. Office file No. 12/14/63-SS).	
Do.	Do.	Do.	Al Istakhari speaks of dealers of ivory of Multan, who had their centre in the bazar near the idol temple.	Multan (Now in West Pakistan.)	1. The History of India as told by its own Historians (The Muhammadan Period)—by H. M. Elliot & J. Dowson, Vol. I, Kitab Mahal Private Ltd., pp. 28 and 35.	
Do.	Do.	Do.	—	Kashmir	1. The Development of Trade and Industry under the Mughals (1526 to 1707 A.D.) by S. S. Kulshreshtha, Kitab Mahal Private Ltd., 1964, p. 191.	
Do.	Do.	Do.	—	Benares, Uttar Pradesh.	1. *Ibid*, p. 172.	
Do.	Do.	Do.	—	Jaipur, Rajasthan.	1 The commercial Policy of the Moguls—by D. Pant, Bombay, 1930, p 237.	
Do.	Do.	Ivory works including the manufacture of cabinets inlaid with ivory.	—	Cambay, Gujarat.	1. *Ibid*, p. 154.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
VIII (*concld.*)	Ivory	Ivory works including the manufacture of writing cases and similar goods prettily inlaid with ivory and ebony.	—	Tatta, Sind (now in West Pakistan).	1. *Ibid* p. 154.	
Do.	Do.	Ivory works including inlaid and cunningly turned articles such as bangles, swords, hilt, dice, chessmen, chessboards and bedstands. (1) & (3).	—	Bombay	1. Durate Barbosa, p. 114. 2. History of Gujarat—by Commisariat, p. 262. 3. S. S. Kulshreshtha, *op. cit.*, p. 64.	
IX (1801 A.D. —1900 A.D.)	Do.	Combs	The ivory comb-makers are about fifteen in number and keep five workshops opposite to the temple of Ganapati in Kasba ward. The present small ivory comb industry will probably continue unless it is killed by the importation of European ivory goods. *Brahmin* and other high caste Hindu women think bone combs impure, and three ivory combs always form part of the "*Vayan*" or bride's outfit. Combs for the use of women are rectangular, and have a double set of teeth, while man's combs are crescent-shaped and have only one set of teeth. The small pieces of ivory left over in cutting out pieces for combs are used in making dice. The combs and dice are sold in the workshops by the workers on their own account. Their only customers are high class Hindus.	Poona, Maharashtra,	1. A Monograph on Ivory Carving—by Cecil L. Burns, 1900, pp. 8-9.	
Do.	Do.	Do.	Comb boldly carved with the familiar subject of the Goddess *Mahalakshmi* being lustrated by elephants whose uplifted trunks carry *Chambus*. At the present moment there is an ivory carver at Sattara, but his work is confined to draughtsmen and the ordinary ivory comb.	Sattara, Bombay Presidency (Maharashtra).	1. Indian Ivory Carving —by J. L. Kipling. The Journal of Indian Art, London, July, 1885, No. 7, p. 51, fig. No. 13. (Pl. XXVIII, fig. 4).	
Do.	Do.	Figure	Idol of *Krishna* playing on his flute. It is so minute that the aid of magnifying glass is required to discover the good or the bad points of the work. Tirupati and Godavari have a fair amount of traffic in ivory but mainly in the production of miniature idols.	1. Tirupati 2. Godavari	1. Indian Art at Delhi 1903—by Sir George Watt, *op. cit.*, p. 191.	
Do.	Do.	*Chudi* (Bangles)	—	Broach, Distt. Broach, Gujarat.	1. District Registrar, Co-operative Societies through S.C.O. Gujarat, (*vide* R. G. Office file No. 12/14/63-SS).	

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APPENDIX I—*contd.*

1	2	3	4	5	6	7
IX (*contd.*)	Ivory	Mirror frame	The mirror frame in design and execution is a quaint bit of Hindu naivete. The pediment represents *Krishna's* theft of the clothes of the celestial milkmaids while they were bathing. This seems to be the most popular of all freaks ascribed to *Krishna*. The panels of the sides of the mirror are filled with rude reliefs showing the pleasure of the native and the English gentlemen. The former smokes his *hukka*, listens to the song of the *Nautch*-woman and cherishes his wife and children. The latter walks abroad with the English Lady (in most native work the English lady wears as here, a narrow skirted, last century dress) and goes a hunting.	Central India.	1. Indian Ivory Carving —by J. L. Kipling, The Journal of Indian Art, London, July, 1885, No. 7, p. 52. (Pl. XXIX, fig. 1).	
Do.	Do.	Box or Casket	Ivory box or casket decorated with floral designs and creeper motifs as well as female figures and peacocks.	Udaipur, Rajasthan.	1. *Ibid*, p. 52, fig. 8. (Pl. XXIX, fig. 2).	
Do.	Do.	Box	Box of fine ivory, round which human figures are carved. The box is so contrived that it opens only by pressing in two bolts of ivory placed on both the sides of the box.	Junagarh, Maharashtra.	1. A Rough List of Indian Art Ware by T. N. Mukharji, Calcutta, 1883, p. 6.	
Do.	Do.	Do.	Ivory box made entirely of small pieces of ivory jointed together at each angle of the Octagon, while the top is carved from a solid piece. It is one of the best examples of the Art of ivory carving produced in Western India. (1) The top which is serving as a lid is decorated with two reclining male and female figures probably under a tree. The male figure, probably a warrior, is seen holding a sword by the right hand, while the female figure is shown reclining on a lion with a bird on her knee. The sides of the box is decorated with male and female figures who seem to be the attendants standing in front of the doors. The box has octagonal base with probably ten legs. The whole box is beautifully decorated with minute floral and geometric designs and motifs (2).	Bhuj, Gujarat.	1. A Monograph on Ivory carving—by Cecil L. Burns, *op. cit.* pp. 4-5, pl. Ia & Ib. 2 Description by the Compiler. (Pl. XXIX, fig. 4).	
Do.	Do.	Door	The *Darshani* Door at the Golden Temple, Amritsar, is inlaid with ivory, much of which is stained in the characteristic way, *viz.*, with green and red. These doors probably date from Ranjit Singh's restoration of the temple in 1802 A.D.	Amritsar, Punjab.	1 Indian Art at Delhi, 1903—by Sir George Watt, *op. cit.* p. 175.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
IX (*contd.*)	Ivory	Ivory carving	—	Mahuva, Distt. Bhavnagar, Gujarat.	1. District Registrar Co-operative Societies through S.C.O Gujarat, (*vide* File No. 12/14/63-SS).	
Do.	Do.	Ivory carving including different types of decorative and utilitarian objects.	Sylhet has speciality in ivory-ware, the carvers of which are characterised by much ingenuity and taste. Their work consists of mats, fans, sticks, chessmen, dice and *gutis* (the pegs which pass between the great toe and toe next to it, to prevent the sandal from slipping off the foot) (1). Among other examples mention may be made of Box with ten sets of letters; chair with cross-pendant, work-box and scent-case (2).	Sylhet, Assam.	1. Statistical Account of Assam, by W. W. Hunter, Vol. II, Trubner & Co., London, 1879, p. 34. 2. A Rough List of Indian Artware—by T. N. Mukharji, Calcutta, 1883, p. 6.	
Do.	Do.	Do.	The "*Gudgars*" of Kanara whose chief calling is carving on sandal wood and painting, also carve ivory. They generally work on ivory to order, and seldom offer articles for sale. The articles made are generally small boxes, combs, sets of Chessmen, images, paper-cutters, card-cases and other fancy articles. Raw material is imported from Bombay or Mysore.	Kanara (Kumta, Banvasi, Siddapur and Bilgi).	1. A Monograph on Ivory Carving—by Cecil L. Burns, *op. cit.* p. 7.	
Do.	Do.	Do.	At Sehwan town the carving mainly consists of the manufacture of sets of plain arm rings called *bahin* when they are full-sized and *gabha* when they are for children. No other articles are ordinarily made, but buttons, dice and handles of knives can be made to order, as also chessmen and pieces for the game of *chopar*. The carving is always of the simplest kind, and has no artistic merit to speak of.	Sehwan town, Karachi.	1. *Ibid*, pp. 7-8.	
Do.	Do.	Do.	(*i*) *Bangles*: turned in different sizes and done on an ordinary wooden lathe, when they are either coloured deep red or are covered outside with thin sheets of gold or silver. The former are worn by women of almost all the lower classes of Hindus only. (*ii*) *Hinghratia or Ornamental boxes*: Used for preserving "*Kankoo*" a mixture of turmeric and carbonate of Soda, or Vermillion especially by the women when engaged in sacred duties or marriage festivals. (*iii*) Snuff-boxes, buttons, dice, combs, paper-knives, English alphabets, small pictures carved in relief and ribbons for	Surat	1. *Ibid*, pp. 9-10.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
IX (*contd.*)	Ivory	Ivory carving including different types of decorative and utilitarian objects.	carved sandal wood boxes are also made. Some of the vegetable products such as raddish, chilly, brinjal, hibiseus etc. are also represented in crude manner. Among toys humming tops, jingling bells, chess-boards, checkmates etc. are also made.	Surat		
			(*i*) A large paper-cutter—This splendid piece of work took three years to make. The handle represents an elephant standing on a pedestal of admirable relief foliar carving; the scroll on the blade is bold Mughal work.	Delhi	1. Indian Art at Delhi 1903—by Sir George Watt, Calcutta, pp. 177-178, pl. 40, figs. 3, 7, pl. 61, figs. 1, 2 & 3. (Pl. XXIX, fig. 3).	
			(*ii*) An elephant loaded with guns, camp equipage, etc. each article including the chains cut from solid ivory. This is a marvellous piece of work, more wonderful than artistic, but it shows the great skill that has been attained when the links of a chain, each not more than the size of a pin's head, can be cut from solid ivory so that they are distinct and within each other.		2. A Rough List of Indian Artware—by T. N. Mukharji, Calcutta, 1883, p. 7. 3. *Ibid*, p. 6. (Pl. XXX, fig. 1). 4. Indian Ivory Carving—by J. L. Kipling. The Journal of Indian Art, London, July, 1885, No. 7, p. 50, & p. 52.	
			(*iii*) Miniature painting on Ivory representing caskets richly chased in foliated scrolls. The large panels depict mythological scenes, the upright panels are in Ahmedabad style and the scroll work, in bold floriation of Mughal pattern. The painted medallions represent the more noteworthy buildings of Agra and Delhi (1).		(Pl. XXX, fig. 2).	
			As regards the technique it is recorded that the ivory is sawn up into very thin plates which are most carefully seasoned and pressed that they may not curve, and are finally polished. The painting, when finished, is protected by a very thick but clear glass, smoothed off at the edges like a pebble. The work is always executed either in colour, which is generally soft, rich and effective, or else in Indian ink, more light and shade. These latter are often pleasing, especially in the landscape subjects, for them the very conventional treatment of the trees and sky becomes less prominent than in the coloured ones. (2)			
			(*iv*) Among other ivory objects produced at Delhi mention may be made of card-case, sandal-box, paper knife and			

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APPENDIX I—*contd.*

1	2	3	4	5	6	7
IX (*contd.*)	Ivory	Ivory carving including different types of decorative and utilitarian objects.	comb. The carving is wholly done with the aid of the ruddest files, chisels, knives and steel styles. (3) The ivory-carvers of the Dariba at Delhi, reproduce everything that Moorshedabad produces, and elephants, camels, boats, and goddesses are there regularly turned out to pattern (4).	Delhi		
			An extensive manufacture in bangles, *Surmadanis* (antimony boxes), chessmen etc. has been developed in Jaipur, Ajmer-Marwara, Alwar, Bikanir and the village of Pali. Figures of animals are made in Rewa and paper-cutters, sword-hilts, combs etc., at Ratlam, Dhar and Alipura. The Pali (Jodhpur) craft in ivory deserves special mention. The bangles are of graduated sizes so as to cover the arm almost from the shoulder to the wrist. They are usually so elaborately coloured and ornamented with lac, beads, and gold leaf, that a cheaper material might easily be substituted. The colours are red and green with black lines and circles. One of the most striking peculiarities of Pali ivories is the manner in which they are ornamented, *viz.*, by circles and lines loaded with pink, green or black lac.	1. Rajputana. 2. Jaipur. 3. Ajmir-Marwara. 4. Alwar. 5. Bikaner. 6. Udaipur. 7. Pali in Jodhpur. 8. Rewa. 9. Ratlam. 10. Dhar. 11. Alipura.	1. Indian Art at Delhi—1903—by Sir George Watt, Calcutta, pp. 178—180. 2. Indian Ivory Carving—by J. L. Kipling, *op. cit.* p. 52, No. 10.	
			The delightful series of thumb guards, used in shooting with the bow and arrow are made of ivory. They are richly coated with pale green, or dark claret red, or deep brown or other colour of lac. Through this and on to the white below a delicate design has been scratched which usually depicts some hunting scene, such as a fight between two elephants or a sportsman spearing a tiger while in the act of seizing its kill. In other instances the pattern consists of oriental floral scrolls, the white flowers having a rich effect imparted to them by the margins of the petals or leaves being gilt. The designs on many of these thumb guards are so essentially chinese that it is difficult to suppose that they could have been made in India (1)			
			Of the Rajputana ivory objects special mention may be made of three *bartanas* which will probably be taken for paper-knives. The bottoms are decorated with hunting and fighting scenes, birds such as peacock and other floral designs and human figures. European influence is prominent in their line and form, style and execution. (2).		(Pl. XXX, fig. 3).	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
IX (*contd.*)	Ivory	Ivory carving including different types of decorative and utilitarian objects.	Table ornaments, such as elephants, models of bullock carts, processions, marriage ceremonies and such like were made by the ivory workers of Bengal. Besides, the image of *Durga* was also in demand for the popularity of the festival of *Durga*. Though made of ivory, it is identical with that produced in clay or in *sola* pith. The manufacture of *Durga* images was a speciality of Murshidabad, but it is now copied in Delhi, and Patiala and finds a market all over India.	Bengal, specially Berhampur, Murshidabad Distt.	1. Indian Art at Delhi —1903, by Sir George Watt, *op. cit.* pp. 180-184. 2. A Monograph on Ivory-carving in Bengal—by G. C. Dutt, Calcutta, 1901, pp. 3-10, pl. Nos. 2, 3 and 4.	
			The principal centre of ivory carving in Bengal has always been the district of Murshidabad. The ivory-carvers of Murshidabad are all Hindus and belong to the *Vaisnav* sect. The caste is called *Bhaskar*, or image-maker, and is a branch of the carpenter caste. The tools used by the carvers are as follows : (1) Files of various sizes ; (ii) saws, (iii) small chisels, (iv) screw-drivers, (v) awls of various sizes, (vi) pliers, (vii) compasses, (viii) a vice, (ix) mallets (wooden), (x) AT square and (xi) a lathe. The following is a list of ivory articles made in Murshidabad.			
			(*i*) *Durga* (the ten-handed goddess with her attendant gods and goddesses in the act of fighting with the giant *Mahisasura*).		(Pl. XXX, fig. 4).	
			(*ii*) *Kali* standing on the body of *Shiva* with two attendant goddesses.			
			(*iii*) *Jagaddhatri* standing on the lion and elephant with two attendant goddesses.			
			(*iv*) *Jagannath's* car procession.		(Pl. XXXI, fig. 1).	
			(*v*) Palanquin, single or with bearers and attendants.			
			(*vi*) Chessmen, (*vii*) Work-box,			
			(*viii*) Elephant, single or caparisoned, or fighting with tiger ;			
			(*ix*) Horse plain or with rider,			
			(*x*) Bullock-carts,			
			(*xi*) *Mayurpankhi* or peacock stage large,			
			(*xii*) Camel, single or with driver,			
			(*xiii*) Cow, single or with-calf,			

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APPENDIX I—*contd.*

1	2	3	4	5	6	7
IX (*contd.*)	Ivory	Ivory carving including different types of decorative and utilitarian objects.	(*xiv*) dog, (*xv*) Pig, (*xvi*) Buffalo, (*xvii*) Crocodile, (*xviii*) Deer, (*xix*) Plough with ploughman,	Bengal.		
			(*xx*) Locket and chain (with or without gold or silver mounting),		(Pl. XXXI, fig. 2).	
			(*xxi*) Ear-rings, (*xxii*) Figures of ladies, Hindu priests, Washermen, Water-carriers, Peons, Porters, Tailors, Sepoys, Fakirs, Policemen,			
			(*xxiii*) Paper-cutter ;			
			(*xxiv*) Bangles, bracelets with or without gold or silver mountings,			
			(*xxv*) Card-case, (*xxvi*) knitting needles, (*xxvii*) Crochet needles, (*xxviii*) Napkin rings, (*xxix*) Photo frames, (*xxx*) Caskets, (*xxxi*) Sticks, (*xxxii*) Fly-flap and (*xxxiii*) Combs. (2) (*xxxiv*) Elephant with a *howdah* in which two royal figures are sitting. The manufacture is said to have originated in sylhet (Assam) and to have followed the transference in Muhammadan times of the seat of Government from Dacca to Murshidabad. (3).		(Pl. XXXI, fig. 3). 3. Indian Ivory Carving —by J. L. Kipling, The Journal of Indian Art, London, July, 1885, No. 7, p. 51, pl. 5.	
			It is reported that the industry is declining and the quality of the ivory work has also deteriorated, one cause of which being the interference of Europeans with native workmanship. Mr. Inglis, the Commissioner for India, states, that the Murshidabad ivory manufactures were perhaps more admired than any other class of goods in the Indian Court, one Chief merit being that the subjects were also purely original. They were more artistic than those of Ceylon and much cheaper. (4).		4. A Rough List of Indian Artware—by T. N. Mukharji, Calcutta, 1883, p. 6.	
Do.	Do.	Do.	Within the last 30 years the industry has altogether died out from the villages of Mothra, Daulatbazar and Ranshagorgram, near the city of Murshidabad. Thirty years ago there were over 50 families of ivory-carvers at Mothra, and even so recently as 12 years back there were about a dozen houses left. Many of them died of malarious fever, and the few survivors have migrated to Baluchar, Berhampur and other places with the result that at present there is not a single *Bhaskar* in Mothra. (5).	Mothra, Daulatbazar and Ranshagorgram, near the city of Murshidabad, in the jurisdiction of Daulatabad Thana.	5. A Monograph on Ivory Carving in Bengal —by G. C. Dutt, Calcutta, 1901, p. 8.	

1	2	3	4	5	6	7
IX (*contd.*)	Ivory	Ivory carving including different types of decorative and utilitarian objects.	From the Official Report of the Calcutta International Exhibition it appears that even so recently as 1883, the art of ivory carving used to be practised in other districts of Bengal, such as Hill Tippera, Chittagong and Dacca. (6) Sir George Watt in his "Indian Art at Delhi-1903", also records that Tipperah has enjoyed the reputation of being one of the most ancient seats in Bengal of the art of ivory carving and ivory mat-weaving. As for example mention may be made of an ivory chair furnished by the *Maharaja* of Tipperah. This is a splendid piece of massive and graceful work. (7).	Hill Tipperah, Chittagong and Dacca.	6. *Ibid*, p. 5. 7. Indian Art at Delhi—1903—by Sir George Watt, *op. cit.*, pp. 180-184.	
			Ivory work is also done in three shops in Calcutta. They are all situated in Harcatta Lane in Bow Bazar. All three carvers are carpenters by caste, and carve such plain things as buttons, chains, combs, mouthpieces of *hukkas*, and walking sticks from ivory, horns and eleplant bones. They have no pretensions to perforation or ornamental work, nor in the making of statues and images. They have no assistant in their shops, and they manage both the manufacture and the sale themselves. (8)	Calcutta	8. A Monograph on Ivory Carving in Bengal —by G. C. Dutt., *op. cit.*, p. 5.	
			The next important centre of ivory carving was at Panga, in the Kurigram sub-division of Rangpur. It is reported that there are only six families of ivory carvers or *Khondikars* as they are locally called. They say their forefathers were brought from Bihar and were settled there by the *Raja* of Panga. The industry is now in a moribund condition for lack of encouragement, and the existing workmen have lost much of the skill their fathers possessed in the art. They have all betaken themselves to agriculture, which is now their chief occupation, and work on ivory in leisure moments, or when local fairs (at Sindurmati and Masankura) take place. At present there are only four men who possess the requisite skill to make such homely articles as combs, ear-scratchers, *churis* or bangles, dice, chessmen, etc. The Panga *Khondikars* are Mussalmans by religion. (9) There were ivory carvers at that time in other parts of the district of Rangpur such as Kakinia and Barabari, but they have disappeared since. (10).	Panga, in the Kurigram sub-division of Rangpur, Kakinia and Barabari in the Rangpur District.	9. *Ibid*, pp. 2-3. 10. Official Report of Calcutta International Exhibition, Vol. II, 1883, p. 5.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
IX (*contd.*)	Ivory	Ivory carving including different types of decorative and utilitarian objects.	(*i*) The figure of tortoise consists of 4 pieces of ivory and is 8 inches long by 6 inches wide. The body of the animal is represented as wreathed and garlanded with flowers held in the mouth, while entangled within these floral ornamentations are two charmingly carved and cleverly stained paraquets. The floral work is deeply cut, is literally dispersed with large composite flowers that look like moonstones or lotus-leaf discs and the deeply under-cut foliage recalls very forcibly the sandal wood work of Mysore. The zones of the scroll work and the garlanding of the body of the animal are strongly suggestive of chalukyan Art. (1).	Orissa.	1. Indian Art at Delhi, 1903, Sir George Watt, *op. cit.*, pp. 180-184, pl. 77. 2. Description by the Compiler, pl. 76 (Indian Art at Delhi, 1903, George Watt). (Pl. XXXI, fig. 4).	
			(*ii*) The statuettes of *Krishna* standing on a lotus pedestal is really unique in its style and execution. The figure is richly decorated with a crown, and jewellery and ornaments such as necklaces, bracelets, armlets, anklets, ear-rings and finger-rings. He is shown standing in a dancing pose. His hands are kept in such a manner as if to hold a flute. The feminine characteristics in the treatment of the body are notable. He is wearing a tight fitting garment with tapering-like ends hanging down on either side of the body. It may be regarded as an example of forceful modelling in ivory in the round. (2).		(Pl. XXXII, fig. 1).	
			(*iii*) The figure of infant *Krishna* kissing his toe. The hair is shown as in a profussion of short curls. It is a beautiful piece of solid ivory measuring 8½" in length and 3½" in thickness. (3).	Orissa.	3. Indian Art at Delhi. 1903—Sir George Watt, *op. cit.*, pp. 180-184.	
			(*iv*) In Balasore there is yet one man alive who does some carving work. He makes sticks, ivory chains and the like when ivory is supplied to him.	Balasore, Orissa.	4. A Monograph on Ivory carving in Bengal —by G. C. Dutt, *op. cit.*, p. 5.	
Do.	Do.	Ivory carving	—	(*i*) Monghyr, Bihar, (*ii*) Patna, Bihar (*iii*) Darbhanga, Bihar.	1. *Ibid*, p. 5. 2. Indian Art at Delhi, 1903—by Sir George Watt, *op cit.* pp. 180-184.	

1	2	3	4	5	6	7
IX (*contd.*)	Ivory	Ivory works including carving.	—	(*i*) Poona. (*ii*) Kanara. (*iii*) Surat. (*iv*) Baroda. (*v*) Karachi. (*vi*) Halla. (*vii*) Kathiawar. (*viii*) Kach.	1. Indian Art at Delhi, 1903, Sir George Watt, *op. cit.*, pp. 184-185.	
Do.	Do.	Ivory carving including different types of decorative and utilitarian objects, figures etc.	(*i*) Hexagonal ivory shrine with idols placed within the six triangular niches thus formed. The pillars, canopies, spandrils, roofing, etc.,of this beautiful piece of work are admirable and manifest in a forcible way; the great peculiarities of this style of ivory such as its massive form, purity in design and excellence in finish. (*ii*) Massive idol representing Vishnu seated on the snake with a canopy formed by a five dog headed hood. (*iii*) Brush-back in solid ivory with a boldly drawn floral scroll, interspersed with animal forms seem to originate and receive the floriation. From the stand point of design this is perhaps the most admirable and perfect of the many beautiful works made at Travancore. (*iv*) The money-counting board is another splendid achievement of decorative art, which demonstrates the purity in design and feeling that is so remarkable a feature of these Travancore ivories. The small circular holes are intended, when filled, to count 100 *chukrams*. The handle consist of dignified floriations proceeding from lion griffins. (*v*) The casket is a piece of work of which Travancore may be justly pround, but it is very much more Dravidian (*Swami*). It represents by its twelve panels round the sides, the various incidents, in regular historic sequence, of the story of the *Ramayana*, while on the lid is carved the final scene —the coronation ceremony. (*vi*) The doorway is a delightful model of the approach to a temple or house in Travancore, showing a flight of steps and moon-stone that strongly recall the similar structures in the ancient Buddhist pavilion of Anuradhapura in Ceylon. It illustrates all the peculiarities of the quaint style of wooden architecture, met with in the extreme south-its	Travancore, Kerala.	1. *Ibid*, pp. 187-189, pl. Nos. 43, 41, figs. 2, 4, 5 & 6 and pl. 42, fig. 2. (Pl. XXXII, fig. 2).	

APPENDIX I—*contd.*

1	2	3	4	5	6
IX (*contd.*)	Ivory	Ivory carving including different types of decorative and utilitarian objects, figures etc.	Dravidian double *yali* pillars, its floral scrolls, suspended like draperies from straight, not curved, eaves and its great elaboration in detail of beams, joists, etc..—peculiarities that in some respects give an aboriginal (or pre-Dravidian) turn to the art and architecture of Travancore.		
			(*vii*) J. L. Kipling describes some of interesting ivory examples from Travancore. The mirror back in the centre has some southern Hindu feeling, but there is a decidedly "modern" if not quite European sentiment in the comb, on which is sculptured in relief a scene from the story the *Gopa Sudama* and *Krishna*, in the browsing elephants, and the figure of *Narayana* as a child in a leaf. It is probably from this courtly use of ivory that the modern Vizagapatam trade in a pretty kind of stationers' goods such as desks, paper-knives, work-boxes, book-slides etc., wrought in sandal wood inlaid with engraven ivory or with ivory cut out in open work and fastened on black bison horn, has been developed.		2. Indian Ivory Carving —by J. L. Kipling. The Journal of Indian Art, London, July, 1885, No. 7, p. 51, fig. No. 4.
Do.	Do.	Ivory carving including utilitarian and decorative objects.	(*i*) Brush back portraying practically every feature of jungle life and sport. The foreground, middle distance, distance and clouds, are all faithfully treated and, in a manner that is most surprising, every detail is shown and still the atmosphere of high class painting has not been materially disturbed nor the picture overburdened. On the reverse is an exceedingly clear modern design. The *Karela* gourd is the subject. The composition, balance and harmony raise this little sketch to that of the highest decorative art.	Mysore.	1. Indian Art at Delhi—1903, by Sir George Watt, *op. cit.* pp. 189-190, pls. No. 42, fig. I, pl. No. 40, fig. 4. [Pl. XXXII, fig. 3].
			(*ii*) A charming casket bound in richly repoussed gold. The side panels depict jungle life and sport, one of the most beautiful showing elephant catching. The panel on the lid is a mythological subject. The floral ornamentation is in the characteristic style as found in the sandal wood of Mysore.		
			(*iii*) Inlaying wood with ivory. The skill displayed by the Mysore inlayers far excels that of Hoshiarpur and other localities in Northern India. Mysore inlaid ivory is richly loaded with black lac after the fashion practised in Vizagapatam.		

APPENDIX I—*contd.*

1	2	3	4	5	6	7
IX (*contd.*)	Ivory	Ivory carving including different types of decorative and utilitarian objects.	(*i*) Vizagapatam is the centre of the veneered ivory work of India. For example the *howdahs* and chairs are carved in a low flat style very much like the ivory-carving of Patiala. They are coloured with lac, mostly in shades of green and blue, and are identical with a sofa and set of chairs. In Vizagapatam a large amount of ivory carving, as well as ivory-staining, is practised, but mostly as veneers or appliques over sandal wood or tortoise-shell boxes. It will be observed that the delicate trellis of ivory thrown over the tortoise—shell is richly carved as well as perforated, the designs being in graceful geometric scrolls with medallions of mythological and animal subjects thrown within the floriation. (1).	1. Vizagapatam, Madras 2. Patiala, Punjab.	1. Indian Art at Delhi 1903, by Sir George Watt. *op. cit.* p. 191.	
			(*ii*) The elaborate examples of Vizagapatam work specially include Jewel caskets made of ivory on tortoise shell. The execution is delicate, and it is unnecessary to dwell on the faults of the design. (2).	Vizagapatam, Madras.	2. Indian Ivory Carving by J. L. Kipling. The Journal of Indian Art, *op. cit.* p. 51, Fig. Nos. 1, 2 & 3. [Pl. XXXIII, fig. 1].	
			(*iii*) Among other examples mention may be made of a book-back or folio case in bison horn. The subjects in the oval cartouches are *Garudas* on which divinities are seated. (2) The plain baskets, bracelets, solitaeres, blotting books, combs and writing companions, are usually ornamented with black scroll work, either simply etched or engraved. The workmanship and finish of the articles are superior, and they are much in demand as drawing-room ornaments, for which they are well suited. (3).		3. A Rough List of Indian Artware —by T. N. Mukharji, Calcutta, 1883, p. 6. [Pl. XXXIII, fig. 2].	
Do.	Do.	Do.	In Ludhiana an extremely modern traffic has assumed some importance, *viz.*, the manufacture of billiard balls. In Patiala a fairly old industry exists in shallow surface floral tracery —a minute and elaborate style in which, although the designs are good, the workmanship and joinery are very bad. Among the Patiala ivory examples, the dagger and sheath decorated with delicate floral designs deserve special mention. In Amritsar the industry would appear to have originated with the requirements of the grandees of the Muhammadan Court and subsequently with those at the *Sikh* Court. (1).	(*i*) Ludhiana. (*ii*) Patiala. (*iii*) Amritsar. (*iv*) Multan. (*v*) Dera-Ghazikhan. (*vi*) Gujranwala. (*vii*) Hoshiarpur. (*viii*) Lahore. (*ix*) Sialkot. (*x*) Bhera. (*xi*) Indor, Madhya Pradesh.	1. Indian Art at Delhi —1903, by Sir George Watt. *op. cit.* pp. 175-176. 2. Indian Ivory Carving —by J. L. Kipling *op. cit.* pp. 50-52 fig. Nos. 10 and 11.	

APPENDIX I—*contd.*

1	2	3	4	5	6	7
IX (*contd.*)	Ivory	Ivory carving including different types of decorative and utilitarian objects.	J. L. Kipling, in his monograph on Indian Ivory carving gives a very interesting account of the Punjab ivory works. The Maharaja of Patiala is said to have store-houses of ivory which he does not sell, but makes into ivory bracelets and distributes them on the occasion of weddings. In the Patiala state, the head of the *Sikh* houses of the Punjab-carving, under courtly patronage accompanied the turners trade, and it is to encouragement of this kind that the most notable specimens of the art as practised in India are due. The cutters of Bhera and Sialkot came into Amritsar to buy scraps from comb cutters. The Ivory-inlayers of Hoshiarpur come into Amritsar to buy scraps from the comb-cutters, no fragment being too minute for the inlayers. The aptitude with which the English demand for minuteness and neatness of execution has been met by native workmen is shown in the paper-knives, card-case and combs from Amritsar. Though slightly attractive at first sight, nothing is in the end more tiresome than the tiny geometric pierced tracery, but it is much admired by character. (2). As regards ivory bangles it has been remarked that in the Punjab, on the occasion of a marriage, the *mama* or the maternal uncle of the bride is expected to present her with a set of ivory bangles coloured red, green or black, and ornamented with tinsel spangles, or lines with minute scratched circles, as may be the peculiar fashion of the caste. The higher castes wear these only during the first year of wedlock, after which they are replaced by bangles of silver and gold or other materials. The women of some Hindu Castes, however, always wear ivory. In nearly all cases the nature of the material is so disguised by colour it would appear that some cheaper substance might be made to serve equally well. (3).	. . .	3. Art Manufactures of India—by T. N. Mukharji, 1888, Calcutta, pp. 148-149.	
Do.	Do.	Do.	Combs, small toys, requisites for *Kalamdans*, articles for applying *surma*, etc. chessmen, card-cases, small models of buildings such as the Taj, paper-knives, paper-weights, handle-sticks, etc. small boxes and scissors are made at Canpore. There are two or three small shopkeepers in the Canpore *bazar* who are merely *bazar* workers with no ambition beyond the earning of the necessary 4 *annas* a day.	Kanpore, Uttar Pradesh.	1. A Monograph on Ivory Carving in the North-Western Provinces and Oudh—by L. M. Stubbs, Allahabad, 1900, pp. 3-4.	

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APPENDIX I—*concld.*

1	2	3	4	5	6	7
IX (*concld*).	Ivory	Ivory carving including different types of decorative and utilitarian objects.	Benares was an important centre of ivory carving. For example mention may be made of an elephant *howdah* belonging to the Maharaja of Benares, and probably composed of domestic ivory, the produce of his large stud. An elaborately carved couch on the model of a large English sofa is also in the possession of the Maharaja, for whom these objects with smaller works have been executed by carvers in his employment. Among these may be mentioned a model in ivory and wood of one of the *ghats* on the Ganges at Benares. A feat of a realistic but very unsatisfactory kind was a representation in tinted ivory of a tall plant of corn in ear, with a handful of vetches, apparently just plucked, all elaborately copied from nature.	Benares, Uttar Pradesh.	1. Indian Ivory Carving —by J. L. Kipling, The Journal of Indian Art, *op. cit.*, p. 51, fig. No. 6. [(Pl. XXXIII, fig. 3).]	
Do.	Do.	Do.	There are at Pali whole streets of ivory bangle-turners. Their wares are produced in sets of graduated sizes, covering the arm from the shoulders to the wrist, with an interval for the elbona, and they are worn almost universally in the Western Rajput States. Very few other objects are produced. Small models of fruits such as almonds, mangoes and green red capsicum pods are made as toys or to serve as antimony holders. Flowers are sometimes elaborately curved from nature, not in groups, but for instance, a single rose, crudly coloured in a purely imitative way. To this town may also be traced a curious and most laborious kind of basket work or weaving in fine filaments of ivory. A fan or a mat thus wrought is said to consume three months of unremitting labour.	Pali a Station on the Jodhpur branch of the Rajputana Railway, on the old trade route between Bombay and Delhi.	1. *Ibid*, pp. 50-51.	
Do.	Do.	Ivory (painting)	Painted ivory objects are specially made at Trichinopoly, Madras. For example, mention may be made of some ivory wares painted with the subjects like Cauvery Bridge, Trichinopoly rock, temple and mosque.	Trichinopoly, Madras.	1. A Rough List of Indian Art Ware—by T. N. Mukharji, Calcutta, 1883, p. 7.	

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APPENDIX II

Excavated or Explored sites and centres where existence of ivory craft has been found or reported in different periods

Period	Region	Evidence of ivory craft being practised in the region is present/absent	Number of important excavated sites where ivory objects have been		Number of other important sites for which in literary and other references availability of ivory objects have been		Remarks
			Found	Not found	Reported	Not reported	
1	2	3	4(a)	4(b)	5(a)	5(b)	6
I. Harappan	North-western (including portion now in Pakistan)	Present	1. Harappa. 2. Mohenjodaro. 3. Kalibangan.	1. Rupar. 2. Bara. 3. Alamgirpur. 4. Kotlanihang.	—	Not reported.	
Do.	Northern	Absent	—	Not found.	—	Not reported.	
Do.	Central	Absent	—	Not found.	—	Not reported.	
Do.	Western	Present	1. Lothal	1. Rangpur. 2. Rojdi. 3. Prabhaspatan. 4. Bhagatrav.	—	Not reported.	
Do.	Southern	Absent	—	Not found.	—	Not reported.	
Do.	Eastern	Absent	—	Not found.	—	Not reported.	
II. Post-Harappan	North-western India	Absent	—	1. Ahar. 2. Hastinapura. 3. Rupar. 4. Ahichchhatra. 5. Purana Qila. 6. Kanauj. 7. Alamgirpur. 8. Gilund. 9. Bairat. 10. Atranjikhera. 11. Autha. 12. Noh.	—	Not reported.	
Do.	Northern India	Present	1. Chirand, Bihar.	—	—	Not reported.	
Do.	Central India	Absent	—	1. Nagda. 2. Navdatoli. 3. Jorwe. 4. Maheswar. 5. Tripuri.	—	Not reported.	

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II. Post-Harappan	Central India—*Contd.*	Absent		6. Ujjain. 7. Eran. 8. Kayatha. 9. Besnagar.		
Do.	Western India	Absent	—	1. Prakash 2. Bahal. 3. Nasik. 4. Nevasa. 5. Daimabad. 6. Rangpur. 7. Lothal. 8. Prabhaspatan. 9. Chandoli. 10. Nagal. 11. Songaon. 12. Tekwada.	—	Not reported.
Do.	Southern India	Absent	—	1. Brahmagiri. 2. Maski. 3. T. Narsipur. 4. Kesarapalli.	—	Not reported.
Do.	Eastern India	Present	1. *Pandu-Rajar-Dhjbi*, West Bengal.	—	—	Not reported.

APPENDIX II—*contd.*

Period	Region	Evidence of ivory craft being practised in the region is present absent	Number of important excavated/explored sites where ivory objects have been		Number of important capitals of kingdoms/Mahajanapadas/towns or cities/trade centres, etc. where evidence of ivory objects has been		Number of other important sites for which in literary and other references availability of ivory objects has been		Remarks
			Found	Not found	Found	Not found	Reported	Not reported	
1	2	3	4(a)	4(b)	5(a)	5(b)	6(a)	6(b)	7
III. 7th cent. B.C.—3rd cent. B.C.	North-western India	Present	1. Rupar. 2. Taxila.	1. Ahichchhatra. 2. Hastinapura. 3. Bairat. 4. Bairah. 5. Sambhar. 6. Nagari. 7. Purana Qila. 8. Ahar. 9. Noh. 10. Gilund. 11. Burzahom.	1. Takshasila.	1. Kabul. 2. Pushkalavati. 3. Kapisa. 4. Gandhara (Mahajanapada). 5. Rajapura. 6. Alexandria. 7. Kashmir. 8. Sakala. 9. Multan. 10. Trigarta. 11. Suivihar. 12. Pattala. 13. Indraprastha. 14. Prthudaka. 15. Sthanesvara. 16. Udabhandapura. 17. Purushapura. 18. Usinara. 19. Mayapura. 20. Hastinapura. 21. Virata. 22. Kuru (Mahajanapada). 23. Matsya (Mahajanapada). 24. Kamboja (Mahajanapada).	..	Not reported.	
Do.	Northern India	Present	1. Sonpur	1. Sarnath. 2. Rajgir. 3. Basarh (*Vaisali*). 4. Kausambi. 5. Bhita. 6. Patna. 7. Bulandibagh. 8. Rajghat. 9. Mathura. 10. Sravasti (*Mahet*) 11. Sohagaura. 12. Chirand. 13. Atranjikhera. 14. Prahaladpur. 15. Masaon.	..	1. Mathura. 2. Mayura. 3. Govisana. 4. Matipur. 5. Kanyakubja. 6. Ayodhya. 7. Kausambi. 8. Prayag. 9. Kasi (Varanasi) (Mahajanapada). 10. Pataliputra. 11. Champa. 12. Sravasti. 13. Pava. 14. Rajagriha. 15. Nalanda.	1. Beneras. 2. Kapilavastu (Now in the Tarai, probably Piprawa in the north of the Basti Distt. U.P.).		

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III. 7th cent. B.C.—3rd cent B.C.—*contd.*	Northern India—*contd.*	Present				16. Kusinara. 17. Kapilavastu. 18. Gaya. 19. *Vaisali* (*Mahajanapada*) 20. *Anga* ,, 21. *Magadha* ,, 22. *Kosala* ,, 23. *Vriji* ,, 24. *Malla* ,, 25. *Vatsya* ,, 26. *Panchala* ,, 27. *Surasena* ,, 28. Girivraja. ,, 29. Lalita Patan ,,		
Do.	Central India	Present	1. Nagda. 2. Ujjain. 3. Awra. 4. Kayatha.	1. Maheswar. 2. Tripuri. 3. Eran. 4. Bilawali. 5. Besnagar.	1. *Ujjaini.*	1. Akara. 2. Malava. 3. Dasarna. 4. Bhilsa. 5. Bidarbha. 6. Vidisa. 7. Puskara. 8. Sahajati. 9. *Chedi* (*Mahajanapada*). 10. Avanti ,,	1. Ujjain.	—
Do.	Western India	Present	1. Prabhaspatan. 2. Nagal.	1. Bahal. 2. Nevasa. 3. Prakash. 4. Rojdi. 5. Broach. 6. Kaundanpur. 7. Nagara.	—	1. Kachchha. 2. Dvaraka. 3. Girnar. 4. Junagarh. 5. Valabhi. 6. Dasapura. 7. Bhrigukachchha. 8. Surparaka. 9. Kanheri. 10. Gharapuri. 11. Paithana. 12. Junnar. 13. Pratishthana. 14. Asmaka (Mahajanapada). 15. Nasik.	—	Not reported.
Do.	Southern India	Absent.	—	1. Brahmagiri. 2. T. Narsipur. 3. Porkalam. 4. Dharanikota. 5. Sanur. 6. Kesarapalli. 7. Chandravalli. 8. Tirukkambuliyur. 9. Kondapur. 10. Sengamedu. 11. Pochampad. 12. Amirthamangalam.	—	1. Vanavasi. 2. Sravan-Belgola. 3. Punnad. 4. Uraiyur. 5. Madura. 6. Tamraparni. 7. Kayal. 8. Rameswaram. 9. Kaviripaddinam. 10. Kanchi. 11. Pishthapura. 12. Dantapura. 13. Vengi.	—	Not reported.

APPENDIX II—*contd.*

1	2	3	(4a)	4(b)	5(a)	5(b)	6(a)	6(b)	7
III (*concld.*)	Southern India	Absent		13. Yelleswaram. 14. Kunnattur. 15. Jadigenahalli. 16. Ter.	—	14. Dhanyakataka.	—	—	
Do.	Eastern India	Present	1. Chandraketugarh.	1. Tamluk. 2. Bangarh. 3. Sisupalgarh.	—	1. Ganjam. 2. Kongoda. 3. Tamralipti. 4. Chandraduipa. 5. Kalinga (Mahajanapada) 6. Vanga. 7. Purushottama-kshetra. 8. Pragjyotisha.	—	Not reported.	
IV. 2nd cent. B.C.—3rd cent. A.D.	North-Western India	Present	1. Taxila. 2. Begram. 3. Nagari.	1. Rupar. 2. Ahichchhatra. 3. Hastinapur. 4. Bairat. 5. Rairah. 6. Sambhar. 7. Purana-Quila (Delhi) 8. Ahar. 9. Alamgirpur. 10. Gilund. 11. Burzahom. 12. Autha. 13. Noh.	1. Taxila.	1. Sakala. 2. Gandhara. 3. Kapisa. 4. Pushkara. 5. Alexandria. 6. Patalene. 7. Aria (Herat). 8. Arachosia (Kandahar.) 9. Purushapura.	—	Not reported.	
Do.	Northern India	Present	1. Rajghat. 2. Masaon. 3. Pataliputra.	1. Sarnath. 2. Rajgir. 3. Basarh. 4. Kausambi. 5. Bhita. 6. Bulandibagh. 7. Lauriya-Nandangarh. 8. Mathura. 9. Sonpur. 10. Sohagaura. 11. Chirand. 12. Banimilia-Bahera. 13. Kumrahar. 14. Kanauj. 15. Sravasti. 16. Balirajgarh. 17. Atranjikhera. 18. Kakoria. 19. Jagatram.	1. Pataliputra.	1. Mathura. 2. Kosala. 3. Ayodhya. 4. Ahichchhatra. 5. Panchala. 6. Kausambi. 7. Rajagriha. 8. Magadha.	1. Ayodhya.	—	

Do.	Central India	Present	1. Nagda. 2. Ujjain. 3. Malwa.	1. Pawaya. 2. Maheswar. 3. Tripuri. 4. Dhanora. 5. Aura. 6. Eran. 7. Bilawali. 8. Kayatha. 9. Besnagar.	1. Ujjain. 2. Malwa.	1. Vidisa. 2. Dasapura. 3. Vidarbha. 4. Avanti. 5. Akara. 6. Dasarna. 7. Dabhala.	1. Dasarna (Eastern Malwa), M.P. 2. Vidisa (Bhilsa), Modern Besnagar, M.P.	—	
Do.	Western India	Present	1. Prabhaspatan. 2. Nagal. 3. Nevasa. 4. Ter.	1. Bahal. 2. Brahmapuri. 3. Vadnagar. 4. Prakash. 5. Broach. 6. Samlaji. 7. Junapani. 8. Nagara. 9. Songaon. 10. Dwaraka.	1. Ter (Tagara) 2. Prabhasa (Prabhaspatan ?)	1. Pratishthana. 2. Nasik. 3. Girinagara. 4. Damana. 5. Bhrigukachchha (Broach.) 6. Surashtra. 7. Aparanta. 8. Kalyana. 9. Surparaka. 10. Sigerdis (Probably Cutch). 11. Parada. 12. Dhanuka. 13. Semylla. 14. Melizigara. 15. Palaepatmae.	—	Not reported.	The periplus of the Erythrean sea mentions the names of Ter & Ujjain from where merchandise had to be brought to Barygaza (modern Broach) for export to foreign countries. Muziris, Bechare, and Nelcynda had also flourishing trade in ivory with Rome.
Do.	Southern India	Present	1. Arikamedu. 2. Sankaran. 3. Dharanikota. 4. Kondapur.	1. Brahmagiri. 2. Porkalam. 3. Sanur. 4. Chandravalli. 5. Maski. 6. Pakhlihal. 7. Salihundam. 8. Kunnattur. 9. Jadigenahalli. 10. Amaravati. 11. T. Narsipur. 12. Kesarapalli. 13. Tirukkambuliyur. 14. Kanchipuram.	—	1. Vaijayanti. 2. Amaravati. 3. Kanchi. 4. Asmaka. 5. Togarum. 6. Naura. 7. Tyndis. 8. Damirica. 9. Nelcynda. 10. Comari. 11. Muziris. 12. Poduca. 13. Sopatma. 14. Masalia.	1. Mysore.	—	

APPENDIX II—*contd.*

1	2	3	4(a)	4(b)	5(a)	5(b)	6(a)	6(b)	7
IV (*concld.*	Southern India	—	—	15. Kaveripattinam. 16. Pochampad. 17. Uraiyur. 18. Paiyampalli.	—	—	—	—	—
Do.	Eastern India	Present	1. Chandraketugarh.	1. Tamluk. 2. Bangarh. 3. Mahasthangarh. 4. Sisupalgarh. 5. Jaugada. 6. Pandu-Rajar-Dhibi. 7. Rajbadi-Danga.	—	1. Kalinga. 2. Tosali (Dhauli) 3. Somapa. 4. Tamralipti. 5. Pragjyotisa.	1. Pragjyotisa (Assam) 2. Dantapura (Probably Dantan, Midnapur-Distt. W.B.)	—	

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APPENDIX II—*contd.*

Period	Region	Evidence of ivory craft being practised in the region is present/absent	Number of important excavated explored sites where ivory objects have explosed been: Found	Not found	Number of important Capitals of Kingdoms, Feudal States/Towns/Cities/Provincial Head-quarters, Trade centres, Sea ports, etc. where evidence of ivory objects has been: Found	Not found	Number of other important sites for which in literary and other references availability of ivory objects has been: Reported	Not reported	Remarks
1	2	3	4(a)	4(b)	5(a)	5(b)	6(a)	6(b)	7
V. 4th cent. A.D.—750 A.D.	North-Western India	Present	1. Kashmir.	1. Rupar. 2. Ahichchhatra. 3. Sambhar. 4. Nagari.	1. Kashmir.	1. Kabul. 2. Kandahar. 3. Gandhar. 4. Srinagar. 5. Taxila. 6. Lahore. 7. Indraprastha. 8. Purushpur. 9. Brahmanabad. 10. Multan. 11. Sialkot. 12. Uch. 13. Kangra. 14. Jalandhar. 15. Sirhind. 16. Thaneswar. 17. Hisar. 18. Hansi. 19. Bikaner. 20. Bayana. 21. Ajmer. 22. Jodhpur. 23. Ranthambhor. 24. Jalor. 25. Chittor. 26. Amarkot. 27. Thatta. 28. Mansura. 29. Haiderabad. 30. Debal. 31. Sewan. 32. Rajor. 33. Larkhana. 34. Kalat. 35. Kotah.	—	Not reported.	
Do.	Northern India	Present	1. Masaon. 2. Maheth.	1. Sarnath. 2. Kausambi. 3. Basarh. 4. Bhita. 5. Patna. 6. Bulandibagh. 7. Rajghat. 8. Nalanda. 9. Mathura. 10. Kanauj.	..	1. Mathura. 2. Ahichchhatra. 3. Kanyakubja. 4. Ayodhya. 5. Agra. 6. Kasi. 7. Sravasti. 8. Kusinagara. 9. Vaisali. 10. Pataliputra.	—	Not reported.	

APPENDIX II—*contd.*

1	2	3	4(a)	4(b)	5(a)	5(b)	6(a)	6(b)	7
V (*contd.*)	Northern India—*contd.*	Present	—	11. Balirajgarh. 12. Atranjikhera.	—	11. Prayaga. 12. Gaya. 13. Kapilavastu. 14. Kausambi. 15. Tirhut. 16. Nalanda. 17. Champa. 18. Amaroha. 19. Ghazipur.	—	Not reported.	—
Do.	Central India	Absent	—	1. Mandasor. 2. Maheswar. 3. Tripuri 4. Sirpur. 5. Eran. 6. Kayatha. 7. Besnagar.	—	1. Malwa. 2. Padmavati. 3. Ujjayini. 4. Vidisa. 5. Airikina. 6. Kokanadabota. 7. Khandesh. 8. Mahakosal. 9. Gwalior. 10. Mahoba. 11. Kalinjar. 12. Khajuraho. 13. Bhilsa. 14. Garhmandal. 15. Dhar. 16. Mandu. 17. Illichpur.	—	Not reported.	
Do.	Western India	Absent	—	1. Dwaraka. 2. Brahmapuri. 3. Vadnagar. 4. Prakash. 5. Ter. 6. Prabhaspatan. 7. Broach. 8. Devnimori.	—	1. Dwarka. 2. Somnath. 3. Anantapur. 4. Broach. 5. Sopara. 6. Nasik. 7. Ajanta. 8. Junagarh. 9. Surat. 10. Ellora. 11. Pratishthana. 12. Vatsagulma. 13. Nander. 14. Diu. 15. Daman. 16. Deogiri. 17. Thana. 18. Bombay. 19. Janjira. 20. Dabhol. 21. Kalyani. 22 Anandapura.	—	Not reported.	
Do.	Southern India	Absent	—	1. Nagarjunakonda. 2. Yelleswaram. 3. Kesarapalli. 4. Uraiyur.	—	1. Vaijayanti. 2. Amaravati. 3. Nagarjunakonda. 4. Srisailam.	—	Not reported.	

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V (*concld.*)	Southern India—*contd.*	Absent				5. Palakka. 6. Kanchi. 7. Muziris. 8. Kottayam. 9. Kaveripattanam. 10. Warangal. 11. Raichur. 12. Rajamundry. 13. Kampil. 14. Dwarasamudra. 15. Calicut. 16. Madura. 17. Tanjore. 18. Chandragiri. 19. Nellore. 20. Pishthapur. 21. Vizagapatam. 22. Begpur. 23. Vengi. 24. Kudura. 25. Kantakasila. 26. Erandapalla. 27. Devarashtra. 28. Dhanyakataka.	—	Not reported
Do.	Eastern India	Present	1. Chandra-ketugarh.	1. Tamluk. 2. Bangarh. 3. Mahasthangarh. 4. Sisupalgarh. 5. Tilda. 6. Rajbadi-Danga (Jadupur)		1. Tamralipta. 2. Ganjam. 3. Utkal. 4. Kamarupa. 5. Jajnagar. 6. Satgaon. 7. Nadia. 8. Sonargaon. 9. Gaur. 10. Pundravardhana. 11. Karnasuvarna. 12. Mahendragiri. 13. Kongoda. 14. Pragjyotisha.	1. Assam.	—
VI. 751 A.D. —1100 A.D.	North-Western India	Present	1. Rupar. 2. Hastinapura. 3. Kashmir.	1. Ahichchhatra. 2. Sambhar. 3. Ahar. 4. Gilund.	Kashmir	1. Kabul. 2. Charakh. 3. Ghazni. 4. Kandahar. 5. Gardiz. 6. Peshawar. 7. Und. 8. Poonch. 9. Srinagar. 10. Khewra. 11. Nandana. 12. Bhera. 13. Sakala. 14. Kangra. 15. (Lahore). 16. (Amritsar). 17. Jalundhar. 18. Multan. 19. Deohra.	—	Not reported.

APPENDIX II—*contd.*

1	2	3	4(a)	4(b)	5(a)	5(b)	6(a)	6(b)	7
VI (*contd.*)	North-Western India	—	—	—	—	20. (Simla). 21. Sirsawa. 22. Hardwar. 23. Meerut. 24. Sarawa. 25. Delhi. 26. Alwar. 27. Bairat. 28. (Jaipur). 29. Sambhar. 30. Chatsu. 31. Ajmer. 32. Ranthambor. 33. Debol. 34. Thatta. 35. Amarkot. 36. Nadol. 37. Chitor. 38. Siwana. 39. Abu. 40. Jalor. 41. Nagda. 42. (Udaipur). 43. Bhinmol. 44. (Haiderabad). 45. Mansura. 46. Bahmanabad. 47. (Jaisalmer). 48. (Bikaner). 49. Rohri Aror. 50. (Bahawalpur). 51. Bhatnair. 52. Sirsa. 53. Hansi. 54. Thaneswar. 55. Bhatinda. 56. Nagarkot.	—	—	—
Do.	Northern India	Absent	—	1. Sarnath. 2. Rajghat. 3. Nalanda. 4. Kanauj. 5. Antichak. 6. Balirajgarh. 7. Atranjikhera.	—	1. Mathura. 2. (Agra). 3. Bulandshahr. 4. Kanauj. 5. Etahwah. 6. (Lucknow.) 7. Cawnpore. 8. Sravasti. 9. Ayodhya. 10. Gorakhpur. 11. Asai. 12. (Allahabad). 13. Benares. 14. Patna. 15. Monghyr. 16. Gaya. 17. Amaroha. 18. Prayag.	—	Not reported.	—

VI (*contd.*)	Central India	Present	1. Indragarh.	1. Bilawali.	—	1. Gwalior. 2. (Jhansi). 3. Chanderi. 4. Bhilsa. 5. Ujjain. 6. (Indore). 7. Mandu. 8. Dhar. 9. (Bhopal). 10. (Saugar). 11. Mahoba. 12. Kallinjar. 13. Tewar (Jubbulpore) 14. Khajuraho. 15. (Nagpur). 16. Illichpur.	—	Not reported.	—
Do.	Western India	Absent	—	1. Brahmapuri. 2. Vadnagar. 3. Samlaji. 4. Broach. 5. Nagara.	—	1. Palanpur. 2. Patan. 3. Ahmadabad. 4. Cutch. 5. Navnagar. 6. Cambay. 7. Wala. 8. Porbandar. 9. Kathiawar. 10. Somnath. 11. Belvada. 12. Diu. 13. Daman. 14. Baroda. 15. Ajanta. 16. Ellora. 17. Nasik. 18. Deogiri. 19. Amaraoti. 20. Salsette (Bombay). 21. Poona. 22. Kolhapur. 23. Bijapur. 24. Kalyani. 25. Dabhol. 26. Malkhed. 27. Chaul. 28. Warangal. 29. Thana. 30. Junagarh.	—	Not reported.	—
Do.	Southern India	Absent	—	1. Kaveripattinam 2. Kanchipuram. 3. Kesarapalli. 4. Amaravati.	—	1. Banavasi. 2. Sringeri. 3. (Mangalore). 4. Belur. 5. Mysore. 6. (Calicut). 7. (Palghat).	—	Not reported.	—

APPENDIX II—*contd.*

1	2	3	4(a)	4(b)	5(a)	5(b)	6(a)	6(b)	7
VI (*concld.*)	Southern India	—	—	—	—	8. (Cochin). 9. Tanjore. 10. Trichinopolly. 11. Keladi. 12. Gangoikonda-puram. 13. Salem. 14. Talakad. 15. Mamallapuram. 16. Conjeeveram. 17. Seringapatam. 18. (Bangalore). 19. Tirupati. 20. Srisailam. 21. Vijaynagar. 22. Masulipatam. 23. Rajamahendri. 24. Kanchi.	—	—	
Do.	Eastern India	Absent	—	Not found	—	1. Puri. 2. Konarak. 3. Bhuvaneswar. 4. (Calcutta). 5. Chandradvipa. 6. Nadia. 7. Gaur. 8. Kamakhya. 9. (Tezpur).	—	Not reported.	
VII. 1101 A.D. —1500 A.D.	North-Western India	Present	1. Hastinapura.	1. Bhinmal. 2. Bairat.	—	1. Kashmir. 2. Multan. 3. Lahore. 4. Delhi. 5. Srinagar. 6. Kabul. 7. Ghazni. 8. Kandahar. 9. Peshawar. 10. Und. 11. Kangra. 12. Uchh. 13. Sialkot. 14. Kalat. 15. Ajmere. 16. Ranthambor. 17. Chitor. 18. Anhilwara. 19. Tatta. 20. Bhatinda. 21. Sarhind. 22. Hisar. 23. Jaisalmer. 24. Sambhar. 25. Debal.	—	Not reported.	

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						26. Jodhpur. 27. Jalor. 28. Amarkot. 29. Mansura. 30. Sehwan. 31. Thaneswar. 32. Waihand. 33. Marwar. 34. Meerut.		
VII (*contd.*)	Northern India	Absent	—	1. Sarnath. 2. Rajghat. 3. Karian. 4. Kanauj. 5. Antichak. 6. Sohagaura. 7. Atranjikhera.	—	1. Agra. 2. Kanauj. 3. Prayag. 4. Benares. 5. Patna. 6. Jaunpur. 7. Mathura. 8. Baran. 9. Badaun. 10. Ayodhya. 11. Gaya. 12. Bijnor. 13. Ahichchhatra. 14. Bahraich. 15. Lucknow.	—	Not reported.
Do.	Central India	Absent	—	1. Ujjain. 2. Maheswar. 3. Indragarh. 4. Kayatha. 5. Sirpur. 6. Agra.	—	1. Malwa. 2. Ujjain. 3. Mandu. 4. Dhar. 5. Kherla. 6. Asisgarh. 7. Ellichpur. 8. Jhansi. 9. Bhilsa. 10. Kalinjar. 11. Garhmandal. 12. Gwalior. 13. Chanderi. 14. Jabalpur. 15. Khajuraho.	—	Not reported.
Do.	Western India	Present	1. Dwaraka.	1. Bahal. 2. Brahmapuri. 3. Nevasa. 4. Prabhaspatan. 5. Rojdi. 6. Broach. 7. Samlaji. 8. Nagara.	1. Dwaraka.	1. Junagarh. 2. Somnath. 3. Cambay. 4. Broach. 5. (Daulatabad) 6. Thana . 7. Daman. 8. Dabhol. 9. Deogarh. 10. Kachchha. 11. Chaul. 12. Kalyani. 13. Patan. 14. Sorath. 15. Khandesh. 16. Deogiri.	1. Cambay.	—

APPENDIX II—*contd.*

1	2	3	4(a)	4(b)	5(a)	5(b)	6(a)	6(b)	7
VII. (*concld.*)	Southern India	Absent	—	1. Kaveripattinam. 2. Kanchipuram. 3. Yelleswaram. 4. Arikamedu.	—	1. Warrangal. 2. Dwarasamudra. 3. Madura. 4. Rameshwaram. 5. Karwar. 6. Bidar. 7. Kulbarga. 8. Raichur. 9. Mudgal. 10. Goa. 11. Vijaynagar. 12. Bednor. 13. Madura. 14. Tanjore. 15. Kayal. 16. Kanchi. 17. Nellore. 18. Hampi. 19. Rajamundry. 20. Kampil. 21. Mangalore. 22. Calicut. 23. Quilon.	—	Not reported.	
Do.	Eastern India	Present	1. Orissa	1. Paharpur. 2. Rajbadi Danga (Jadupur).	1. Orissa.	1. Gaur. 2. Nuddea. 3. Satgaon. 4. Sonargaon. 5. Lakhanauti. 6. Puri. 7. Jajnagar.	1. Orissa.	—	

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APPENDIX II—*contd.*

Period	Region	Evidence of ivory craft being practised in the region is present/ absent	Number of important excavated sites where ivory objects have been		Number of important Capitals of Kingdoms Feudal States, Towns, *Subahs*, Cities Provincial H/Qs, Trade-centres, Sea-ports,etc. where evidences of ivory objects have been		Number of other important sites for which in literary and other references availability of ivory objects has been		Remarks
			Found	Not found	Found	Not found	Reported	Not reported	
1	2	3	4(a)	4(b)	5(a)	5(b)	6(a)	6(b)	7
VIII. 1501 A.D. —1800 A.D.	North-Western India	Present	—	1. Hastinapur. 2. Alamgirpur.	1. Jaipur. 2. Udaipur. 3. Bikanir.	1. Kandahar. 2. Kabul (*Subah*). 3. Peshawar. 4. Kashmir (*Subah*) 5. Multan (*Subah*). 6. Lahore (*Subah*). 7. Delhi (*Subah*) 8. Ghazni. 9. Rawalpindi. 10. Srinagar. 11. Amritsar. 12. Ludhiana. 13. Sirhind. 14. Patiala. 15. Karnal. 16. Panipat. 17. Sialkot. 18. Jalandhar. 19. Jalalabad. 20. Chersadda. 21. Mansahra. 22. Attock. 23. Taxila. 24. Dera Ghazikhan. 25. Jammu. 26. Pathankot. 27. Kangra. 28. Nagarkot. 29. Naushera. 30. Bhawalpur. 31. Jodhpur. 32. Ajmer (*Subah*). 33. Tatta or Sind (*Subah*) 34. Uch. 35. Marwar. 36. Chitor. 37. Amarkot. 38. Mewar. 39. Ranthombor. 40. Sehwan. 41. Jalor. 42. Sambhar.	1. Multan (*Subah*). 2. Kashmir (*Subah*). 3. Jaipur. 4. Tatta, Sind (*Subah*)	—	

APPENDIX II—*contd.*

1	2	3	4(a)	4(b)	5(a)	5(b)	6(a)	6(b)	7
VIII. (*contd.*)	North-Western India	Present	—	—	—	43. Nagaur. 44. Ferozepur. 45. Kalsi. 46. Saharanpur. 47. Hardwar. 48. Sonepat. 49. Jaisalmer. 50. Alwar. 51. Bairath. 52. Brahmanabad. 53. Siddhapur. 54. Nagda.		—	
Do.	Northern India	Present	1. Pataliputra (Patna).	1. Rajghat. 2. Karian. 3. Kanauj.	1. Lucknow or Benares. 2. Patna.	1. Fatehpur Sikri. 2. Agra (*Subah*). 3. Allahabad (*Subah*). 4. Ayodhya (*Subah*). 5. Behar (*Subah*). 6. Mathura. 7. Prayag. 8. Benares. 9. Jaunpur. 10. Kora. 11. Buxar. 12. Monghyr. 13. Chunar. 14. Chausa. 15. Rajmahal. 16. Sravasti. 17. Bahraich. 18. Sankisa. 19. Kanauj. 20. Lucknow. 21. Piprawa. 22. Gorakhpur. 23. Sahasram. 24. Mirzapur. 25. Deogarh. 26. Rohtasgarh. 27. Gaya. 28. Patna. 29. Tanda. 30. Burhanpur. 31. Akbarpur. 32. Khairabad. 33. Darbhanga.	1. Darbhanga town.	—	
Do.	Central India	Absent	—	1. Maheswar. 2. Eran.	—	1. Gwalior. 2. Saugar. 3. Damoh. 4. Jubbulpur. 5. Mandla. 6. Seoni.	—	Not reported.	

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						7. Bhopal. 8. Ellichpur. 9. Jansi. 10. Malwa (*Subah*). 11. Sironj. 12. Mahidpur. 13. Indore. 14. Nagpur. 15. Kalinjar. 16. Chanderi. 17. Ujjain. 18. Eran. 19. Datia. 20. Suhania. 21. Orchha. 22. Dhannar. 23. Mandasor. 24. Mahaba. 25. Khajuraho. 26. Chander. 27. Rupnath. 28. Amarkantak. 29. Chanda. 30. Markandi. 31. Mandu.		
Do.	Western India	Present	—	1. Bahal 2. Brahmapuri. 3. Nagara.	—	1. Lahori Bandar. 2. Cambay. 3. Broach. 4. Salaya. 5. Jodhia. 6. Somnath. 7. Surat. 8. Daulatabad. 9. Diu. 10. Daman. 11. Baroda. 12. Poona. 13. Cutch. 14. Bassein. 15. Salsetti. 16. Bombay. 17. Gujarat (*Subah*). 18. Chaul. 19. Aurangabad. 20. Satara. 21. Bijapur. 22. Sonarpur. 23. Ahmadnagar (*Subah*). 24. Ahmadabad. 25. Dwaraka. 26. Junagarh. 27. Dabhoi. 28. Burhanpur. 29. Manmad. 30. Nasik. 31. Supara. 32. Kalyan.	1 Surat. 2. Bombay. 3. Cambay.	—

APPENDIX II—*contd.*

1	2	3	4(a)	4(b)	5(a)	5(b)	6(a)	6(b)	7
VIII. (*concld.*)	Western India	—	—	—	—	33. Junnar. 34. Ajanta. 35. Khandesh (*Subah*) 36. Patan. 37. Thana. 38. Raigarh. 39. Kirkee. 40. Berar (*Subah*). 41. Asirgarh. 42. Champaner. 43. Bhavnagar.	—	—	
Do.	Southern India	Present	—	—	1. Travancore. 2. Goa. 3. Vijaynagar. 4. Bijapur (*Subah*). 5. Mysore. 6. Karnatak region.	1. Warrangal. 2. Hyderabad (*Subah*). 3. Amaravati. 4. Kolhapuri. 5. Bellary. 6. Madura. 7. Raichur. 8. Golkonda. 9. Chandragiri. 10. Calicut. 11. Cochin. 12. Nagapatam. 13. Tranguebar. 14. Madras. 15. Pulicut. 16. Masulipatam. 17. Vizagapatam. 18. Bimlipatam. 19. Pondicherry. 20. Tanjore. 21. Trichinopolly. 22. Seringapatam. 23. Arcot. 24. Vellore. 25. Bidar (*Subah*). 26. Kulbarga. 27. Naldrug. 28. Sholapur. 29. Akalkot. 30. Talikot. 31. Karnal. 32. Bankapur. 33. Cannanore. 34. Rameswaram. 35. Chidambaram. 36. Conjeeveram. 37. Pithapuram. 38. Quilon. 39. Pennaconda. 40. Guntur. 41. Rajamahendri. 42. Pennar. 43. Mangalore.	—	Not reported.	

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Do.	Eastern India	Present	—	—	1. Orissa (*Subah*).	1. *Gaur*. 2. Chattishgarh. 3. Calcutta. 4. Serampur. 5. Chandernagar. 6. Dacca. 7. Puri. 8. Chittagong. 9. Cuttack 10. Jaugad. 11. Bhuvaneswar. 12. Jaipur. 13. Tamluk. 14. Bishnupur. 15. Barakar. 16. Parsanath. 17. Mahendragiri. 18. Calingapatam. 19. Murshidabad. 20. Chinsura. 21. Hugli. 22. Plassey. 23. Bengal (*Subah*). 24. Qasimbazar. 25. Sripur. 26. Satgaon. 27. Sonargaon. 28. Burdwan.	—	Not reported.

APPENDIX II—*concld.*

Period	Region	Evidence of ivory craft being practised in the region is present/absent	Number of important Capitals of Kingdoms, Feudal States and Provincial H/Qs. where ivory objects have been Found	Not found	Number of other important sites for which in literary and other references availability of ivory objects has been Reported	Not reported	Remarks
1	2	3	4(a)	4(b)	5(a)	5(b)	6
X.1801 A.D. —1900.	North-Western India	Present	1. Hastinapur. 2. Ludhiana. 3. Amritsar. 4. Dera-Ghazikhan 5. Lahore. 6. Multan. 7. Patiala. 8. Delhi. 9. Jaipur. 10. Ajmer-Marwara. 11. Alwar. 12. Udaipur. 13. Bikanir. 14. Sialkot.	1. Kabul. 2. Kandahar. 3. Peshawar. 4. Rawalpindi. 5. Ramnagar. 6. Srinagar. 7. Attock. 8. Jullundar. 9. Jalalabad. 10. Herat. 11. Ambala. 12. Dera-Ismailkhan. 13. Hazara. 14. Kapurthala. 15. Kangra. 16. Simla. 17. Bahawalpur. 18. Panipat. 19. Meerut. 20. Kumaun. 21. Rohilkhand. 22. Bharatpur. 23. Hyderabad. 24. Jodhpur. 25. Khairpur. 26. Jaisalmer. 27. Kota.	1. Rajputana. 2. Pali. 3. Bhera. 4. Gujranwala.	—	
Do.	Northern India.	Present	1. Varanasi. 2. Patna. 3. Kanpur. 4. Darbhanga. 5. Monghyr.	1. Rampur. 2. Agra. 3. Avadh. 4. Lucknow. 5. Gorakhpur. 6. Allahabad. 7. Danapur. 8. Arrah. 9. Shahabad. 10. Shahjahanpur. 11. Aligarh. 12. Bareilly 13. Fyzabad. 14. Thaneswar. 15. Mathura. 16. Meerut. 17. Moradabad. 18. Oudh. 19. Fatepur-Sikri. 20. Bhagalpur. 21. Etawah.	—	Not reported.	

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				22. Ghazipur. 23. Muzaffarpur. 24. Saharanpur. 25. Chunar.		
Do.	Central India.	Present	1. Indore. 2. Rewa.	1. Gwalior. 2. Malwa. 3. Bhopal. 4. Sagar. 5. Asirgarh. 6. Berar. 7. Jhansi. 8. Mandasor. 9. Jubbulpore.	1. Ratlam. 2. Dhar. 3. Alipura.	
Do.	Western India.	Present	1. Kutch. 2. Kathiawar. 3. Baroda. 4. Broach. 5. Surat. 6. Poona. 7. Satara. 8. Swean town, Karachi.	1. Diu. 2. Daman. 3. Ahmadnagar. 4. Bombay. 5. Bassein. 6. Aurangabad. 7. Kolhapur. 8. Somnath. 9. Sholapur. 10. Amraoti.	1. Junagarh. 2. Bhuj. 3. Mahuva. 4. Halla.	—
Do.	Southern India.	Present	1. Travancore. 2. Mysore. 3. Vizagapatam. 4. Trichinopolly.	1. Goa. 2. Bijapur. 3. Hyderabad. 4. Guntur. 5. Masulipatam. 6. Bellary. 7. Cuddapah. 8. Bangalore. 9. Coorg. 10. Mangalore. 11. Srirangapatam. 12. Mahe. 13. Calicut. 14. Cochin. 15. Madras. 16. Pondicherry. 17. Karikal. 18. Tanjore. 19. Vellore. 20. Nagapatam. 21. Cranganore. 22. Cuddalore. 23. Madura.	1. Tirupati. 2. Godavari. 3. Kumta. 4. Banvasi. 5. Siddapur. 6. Bilgi.	—
Do.	Eastern India.	Present	1. Calcutta. 2. Dacca. 3. Tiperah. 4. Chittagong. 5. Sylhet.	1. Chandernagore. 2. Sambalpur. 3. Cuttack. 4. Barrackpur. 5. Cooch-Behar. 6. Darjeeling. 7. Jorhat. 8. Chinsura. 9. Manipur. 10. Goalpara. 11. Serampore.	1. Berhampur. 2. Mothra. 3. Daulatbazar. 4. Ranshagorgram. 5. Panga. 6. Kakinia. 7. Balasore. 8. Barabari.	

APPENDIX III

Availability of elephant in different regions during various periods

Period	Areas (including regions now in Pakistan)											
	North-Western India		Northern India		Central India		Western India		Southern India		Eastern India	
	Climate	Whether available	Climate	Whether available	Climate	Whether available	Climate	Whether available	Climate	Whether available	Climate	Whether available
1500 B.C. and earlier	Tropical Humid Climate	Available	Tropical Humid Climate	Available	—	Not available	Tropical Humid Climate	Available	—	Not available	Tropical Humid Climate	Available
1400 B.C. to 1st Century B.C.	Do.	Do.	Do.	Do.	—	Do.	Do.	Do.	—	Do.	Do.	Do.
1st Century A.D. to 10th Century A.D.	Do.	Do.	Do.	Do.	Tropical Humid Climate	Available	—	Not available	Tropical Humid Climate	Available	Do.	Do.
11th Century A.D. to 18th Century A.D.	Do.	Do.	Do.	Do.	Do.	Do.	—	Do.	Do.	Do.	Do.	Do.
19th Century A.D. upto present time	Do.	Not available	Do.	Do.	Do.	Not available	Tropical Humid Climate	Do.	Do.	Do.	Do.	Do.

APPENDIX IV

Period, Typology and Centre

Period	Typology	Centre
I. *Harappan*	(i) Jar-stopper	Mohenjodaro
	(ii) Hair-pin	Mohenjodaro
	(iii) Combs	(1) Mohenjodaro
		(2) Harappa
		(3) Kalibangan
	(iv) Dice	Mohenjodaro
	(v) Vessel	Mohenjodaro
	(vi) Awls and needles	(1) Mohenjodaro
		(2) Harappa
	(vii) Fish	Mohenjodaro
	(viii) Fish like pieces	Mohenjodaro
	(ix) Cubical gamesmen	Mohenjodaro
	(x) Button	Mohenjodaro
	(xi) Rod	(1) Mohenjodaro
		(2) Harappa
	(xii) Roundel	Mohenjodaro
	(xiii) Goblet-shaped terminal	Harappa
	(xiv) Cup	Harappa
	(xv) Cylindrical gamesman	Harappa
	(xvi) Handle	Harappa
	(xvii) Kohl sticks (Antimony rods	Harappa
	(xviii) Pillar-shaped piece	Harappa
	(xix) Shaft	Harappa
	(xx) Cone	Harappa
	(xxi) Balusters	Harappa
	(xxii) Points	Lothal
II. *Post-Harappan*	(i) Dice	Chirand
	(ii) Arrow-heads and styluses	Chirand
	(iii) Comb	*Pandu-Rajar Dhibi*
III. *7th cent. B.C. to the end of 3rd cent. B.C.*	(i) Stopper	Rupar
	(ii) Casket	*Kapilavastu*
	(iii) Hair-pin	(1) Prabhaspatan
		(2) Rupar
		(3) Nagda

APPENDIX IV—*contd.*

Period	Typology	Centre
III *(concld.)*	(iv) Comb	(1) Ujjain
		(2) Taxila
		(3) Nagda
		(4) Rupar
		(5) Nagal
	(v) Dice	Ujjain
	(vi) Pot	Kapilavastu
	(vii) Awls and needles	Ujjain
	(viii) Bangle	(1) Chandraketugarh
		(2) Nagal
		(3) Kapilavastu
	(ix) Pendant	(1) Taxila
		(2) Rupar
		(3) Nagda
		(4) Prabhaspatan
		(5) Ujjain
	(x) Human figure	(1) Bhirmound (Taxila)
		(2) Awra
		(3) Kayatha
	(xi) Ear-reel	Bhirmound (Taxila)
	(xii) Ear-ornament	Ujjain
	(xiii) Beds , bed-legs and lions	Kapilavastu
	(xiv) Mirror-handle	Ujjain
	(xv) Handle	Rupar
	(xvi) Antimony rod (Kohl sticks)	(1) Ujjain
		(2) Chandraketugarh
		(3) Kapilavastu
	(xvii) Arrow head	Sonpur
	(xviii) Seal	(1) Rupar
		(2) Ujjain
	(xix) Miscellaneous (unspecified)	Benares
IV. *2nd cent. B.C. to the end of 3rd cent. A.D.*	(i) Hair-pin	(1) Sirkap (Taxila)
		(2) Nagda
		(3) Prabhaspatan
		(4) Ujjain

APPENDIX IV—*contd.*

Period	Typology	Centre
IV (*contd.*)	(ii) Comb	(1) Taxila (Sirkap)
		(2) Ujjain
		(3) Malwa
		(4) Nagal
	(iii) Die or gamesman	(1) Rajghat
		(2) Masaon
	(iv) Dice	Sirkap (Taxila)
	(v) Awl	(1) Ujjain
		(2) Chandraketugarh
	(vi) Bangle	(1) Sirkap (Taxila)
		(2) Nagal
	(vii) Armlet	Ujjain
	(viii) Pendant	(1) Nagda
		(2) Prabhaspatan
	(ix) Human figure (ritual)	Ter
	(x) Human figure (secular)	Pataliputra
	(xi) Elephant-rider	Kondapur
	(xii) Handle	(1) Arikamedu
		(2) Nevasa
	(xiii) Sword-handle	*Pragjyotisa* (Assam)
	(xiv) Mirror-handle	Taxila
	(xv) Handle of fan or fly-whisk	Sirkap (Taxila)
	(xvi) Antimony rod (Kohl-stick)	Rajghat
	(xvii) Toy furniture or miniature chests	Sirkap (Taxila)
	(xviii) Dagger	Sankaran
	(xix) Knife	Taxila
	(xx) Dice	Chandraketugarh
	(xxi) Stick	Chandraketugarh
	(xxii) Ring	Sirkap (Taxila)
	(xxiii) Bands and decorated plaques including panels.	Begram (Kafiristan)
	(xxiv) Seal	(1) Nevasa
		(2) Nagari
		(3) Dharanikota
	(xxv) Miscellaneous	(1) Dasarna (E. Malwa)
		(2) *Vidisa* (Besnagar)
		(3) *Ayodhya*

APPENDIX IV—*contd.*

Period	Typology	Centre
IV (*concld.*)	—	(4) Mysore
		(5) Dantapura (Midnapore District)
V. *Beginning of the 4th cent. A.D.—750 A.D.*	(i) Animal figure	Unspecified
	(ii) Figure of Buddha and Buddha Avalokitesvara	Kashmir
	(iii) Ring	Assam
	(iv) Game piece	Masaon
	(v) Casket	Chandraketugarh
	(vi) Seal	Maheth
VI. 751 *A.D.*—1100 *A.D.*	(i) Bangle	(1) Rupar
		(2) Indragarh
		(3) Hastinapura
	(ii) Figure popularly known as Charlemagne chessman	Unknown
	(iii) Figure of Bodhisattva	Kashmir
	(iv) Male figure	Kashmir
	(v) Three-tiered stupa	Bengal, Bihar or Orissa
VII. 1101 *A.D.*—1500 *A.D.* . . .	(i) Bangle	(1) Hastinapura
		(2) Dwaraka
	(ii) Amulet	Dwaraka
	(iii) Human figure (amorous couple)	Orissa
	(iv) Figure showing a danseuse	Unspecified (Chalukya work)
	(v) Throne leg	Orissa
	(vi) Inlaid ivory work and turned articles such as bangle, chessman, dice, chess-board, sword, bedstead and sword-hilt.	Cambay
	(vii) Lid	Dwaraka
VIII. 1501 *A.D.*—1800 *A.D.* . . .	(i) Dice	Pataliputra
	(ii) Plaque showing dancing female figures.	Travancore
	(iii) Plaque showing Mary teaching Child Jesus.	Goa
	(iv) Figure showing *Gaja-Lakshmi* (Ritual)	Karnatak Region
	(v) Human figure	Lucknow or Benares
	(vi) *Makara* head	South India
	(vii) Casket	Vijaynagar
	(viii) Throne leg	Orissa

APPENDIX IV—*contd.*

Period	Typology	Centre
VIII (*concld.*)	(ix) Ivory room	Vijaynagar
	(x) Ivory bedstead inlaid with gold	Vijaynagar
	(xi) Doorway inlaid with ivory	(1) Bijapur (Ashar Mahall) (2) Amber Palace, Jaipur (3) Udaipur (4) Bikanir
	(xii) Settee back-rest	Mysore
	(xiii) Bangle	Surat
	(xiv) Inlaid ivory works including turned articles such as bangle, sword-hilt, dice, chessman, chess-board and bed-stand.	Bombay
	(xv) Inlaid ivory works such as cabinets.	Cambay
	(xvi) Inlaid ivory works such as writing cases.	Tatta
	(xvii) Ivory works (unspecified)	(1) Surat (2) Darbhanga (3) Multan (4) Kashmir (5) Benares (6) Jaipur (7) Cambay (8) Tatta (9) Bombay
IX. 1801 *A.D.*– 1900 *A.D.* . . .	(i) Comb	(1) Poona (2) Sattara (3) Kanara (Kumta, Banvasi, Siddapur and Bilgi) (4) Surat (5) Delhi (6) Ratlam (7) Dhar (8) Alipura (9) Berhampur (Murshidabad) (10) Calcutta (11) Panga (Rangpur) (12) Tranvancore (13) Vizagapatam

APPENDIX IV—*contd.*

Period	Typology	Centre
IX (*contd.*)		(14) Amritsar
		(15) Kanpur
	(ii) Idol (Krishna)	(1) Tirupati
		(2) Godavari
		(3) Orissa
	(iii) Bangle	(1) Broach
		(2) Surat
		(3) Jaipur
		(4) Ajmer—Marwara
		(5) Alwar
		(6) Bikanir
		(7) Pali
		(8) Berhampure, Murshidabad
		(9) Panga (Kurigram Sub-division of Rangpur, Bengal)
		(10) Patiala
	(iv) Mirror-frame	Central India
	(v) Box or Casket	(1) Udaipur
		(2) Junagarh
		(3) Bhuj (Gujarat)
		(4) Kanara
		(5) Mysore
		(6) Berhampore (Bengal)
		(7) Travancore
		(8) Kanpore
		(9) Surat
	(vi) Inlaid door or door-way	(1) Amritsar
		(2) Travancore
	(vii) Mat	(1) Sylhet
		(2) Tipperah
		(3) Pali (Rajasthan)
	(viii) Fan	(1) Sylhet
		(2) Pali
	(ix) Stick	(1) Sylhet
		(2) Berhampore (Murshidabad)
		(3) Calcutta
		(4) Balasore
		(5) Kanpur

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APPENDIX IV—*contd.*

Period	Typology	Centre
IX (*contd.*)	(x) Chessman	(1) Sylhet
		(2) Kanara
		(3) Sehwan town
		(4) Jaipur
		(5) Ajmir—Marwara
		(6) Alwar
		(7) Bikanir
		(8) Pali
		(9) Panga (Rangpur, Bengal)
		(10) Kanpore
	(xi) Dice	(1) Sylhet
		(2) Sehwan town
		(3) Surat
		(4) Panga
	(xii) Game-pieces	Sehwan town
	(xiii) Box with ten sets of letters	Sylhet
	(xiv) Chair	(1) Sylhet
		(2) Tipperah
	(xv) Work-box	Sylhet
	(xvi) Scent-case	Sylhet
	(xvii) Idols or images such as Vishnu, Durga, Kali, Jagaddhatri, Krishna etc.	(1) Kanara
		(2) Delhi
		(3) Berhampore
		(4) Patiala
		(5) Orissa
		(6) Travancore
	(xviii) Paper-cutter or knives	(1) Kanara
		(2) Surat
		(3) Delhi
		(4) Ratlam
		(5) Dhar
		(6) Alipura
		(7) Rajputana
		(8) Berhampore (Murshidabad)
		(9) Amritsar
		(10) Kanpore

APPENDIX IV—*contd.*

Period	Typology	Centre
IX (*contd.*)	(xix) Card-case	(1) Kanara (2) Delhi (3) Berhampore (4) Amritsar (5) Kanpore
	(xx) Ring	(1) Sehwan town (Karachi) (2) Berhampore
	(xxi) Button	(1) Sehwan town (2) Calcutta
	(xxii) Handles of knives	Sehwan town
	(xxiii) Snuff-box	Surat
	(xxiv) English alphabets	Surat
	(xxv) Models of vegetable products, fruits and flowers.	(1) Surat (2) Pali
	(xxvi) Toys	(1) Surat (2) Kanpore
	(xxvii) Elephant loaded with guns	Delhi
	(xxviii) Miniature painting on ivory	Delhi
	(xxix) Sandal box	Delhi
	(xxx) Animal figures such as elephants, camels, tortoise, lion, tiger, horse,cow, dog, pig, buffalo, crocodile, deer etc.	(1) Delhi (2) Rewa (3) Berhampore (Murshidabad) (4) Orissa
	(xxxi) Boat	Delhi
	(xxxii) Sword-hilt	(1) Ratlam (2) Dhar (3) Alipura
	(xxxiii) Thumb-guards	Rajputana
	(xxxiv) Models of bullock-carts, processions, marriage ceremonies, buildings, model in ivory and wood of one of the *ghats* on the Ganges at Benares.	(1) Berhampore (2) Kanpore (3) Benares
	(xxxv) Palanquin single or with bearers and attendants.	Berhampore
	(xxxvi) Human figures	Berhampore
	(xxxvii) Work-box	Berhampore
	(xxxviii) Horse-rider	Berhampore
	(xxxix) *Mayurpankhi* or peacock-stage large.	Berhampore

APPENDIX IV—*contd.*

Period	Typology	Centre
IX (*contd.*)	(xl) Camel with driver	Berhampore
	(xli) Plough with ploughman	Berhampore
	(xlii) Chain with locket	Berhampore
	(xliii) Ear-ring	Berhampore
	(xliv) Bracelet	(1) Berhampore
		(2) Patiala
	(xlv) Knitting needles	Berhampore
	(xlvi) Photo-frame	Berhampore
	(xlvii) Fly-flap	Berhampore
	(xlviii) Elephant with *howdah*	(1) Berhampore
		(2) Benares
	(xlix) Chain	(1) Calcutta
		(2) Balasore
	(l) Mouth pieces of *hukkas*	Calcutta
	(li) Earscratchers	(1) Panga (Rangpur, Bengal)
	(lii) Ivory shrine	Travancore
	(liii) Brush teak	(1) Travancore
		(2) Mysore
	(liv) Money-counting board	Travancore
	(lv) Mirror-back	Travancore
	(lvi) Ivory inlaid cut-out desk, paper-knives, work-boxes, book-slides etc. on bison-horn.	Vizagapatam
	(lvii) Inlaying wood with ivory	(1) Mysore
		(2) Hoshiarpur
	(lviii) Jewel-casket made of ivory on tortoise shell.	Vizagapatam
	(lix) Veneered ivory works such as howdahs and chairs.	Vizagapatam
	(lx) Billiard balls	(1) Ludhiana
		(2) Patiala
	(lxi) Dagger and sheath	(1) Patiala
		(2) Amritsar
	(lxii) Antimony rods	Kanpore
	(lxiii) Paper-weight	Kanpore
	(lxiv) Scissors	Kanpore
	(lxv) Carved conch on the model of an English sofa.	Kanpore
	(lxvi) Painted ivory works	Travancore

APPENDIX IV—*concld.*

Period	Typology	Centre
IX. *(concld.)*	(lxvii) Miscellaneous Ivory works (unspecified).	(1) Mahuva (2) Surat (3) Udaipur (4) Tipperah (5) Chittagong (6) Dacca (7) Kakinia (8) Barabari (Rangpur District, Bengal) (9) Monghyr (10) Patna (11) Durbhanga (12) Poona (13) Kanara (14) Baroda (15) Karachi (16) Halla (17) Kathiawar (18) Kutch (19) Bhira (20) Sialkot (21) Dera-Ghazikhan (22) Gujranwala (23) Indor (24) Multan

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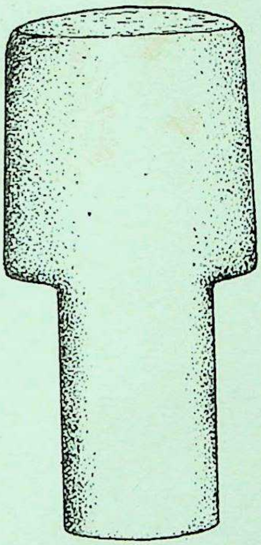

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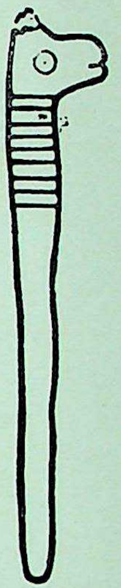

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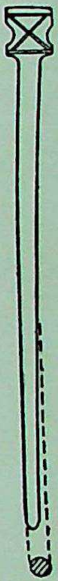

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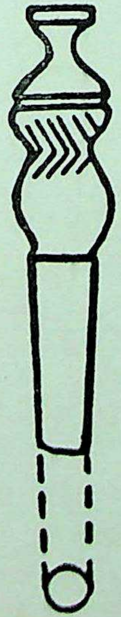

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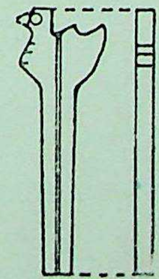

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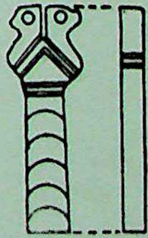

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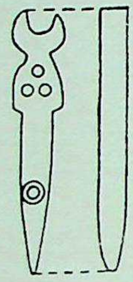

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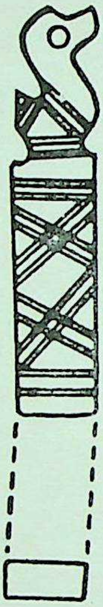

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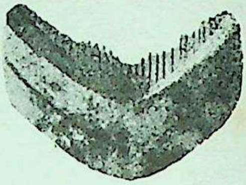

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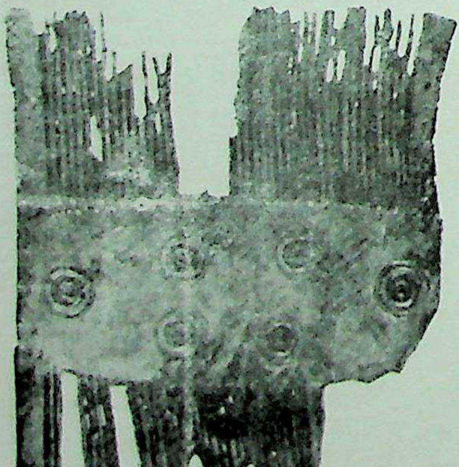

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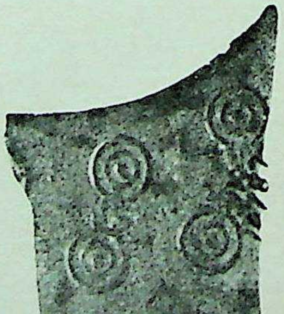

Fig. 4

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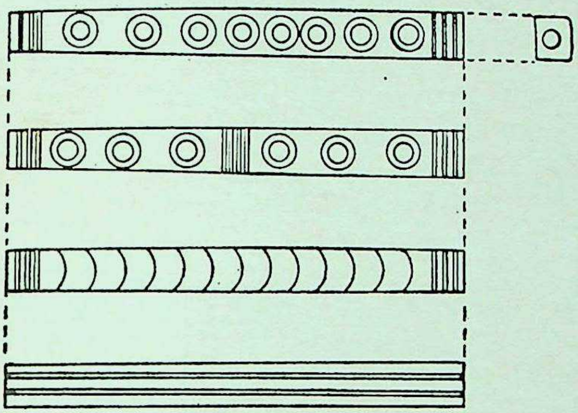
Plate III



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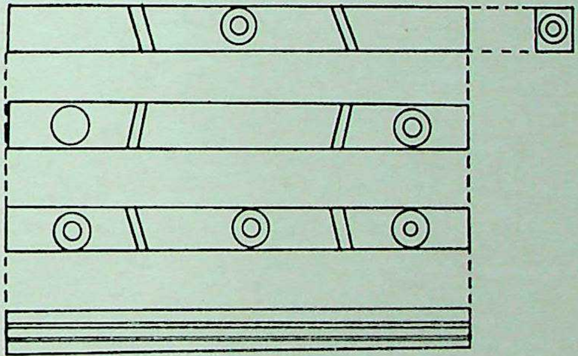

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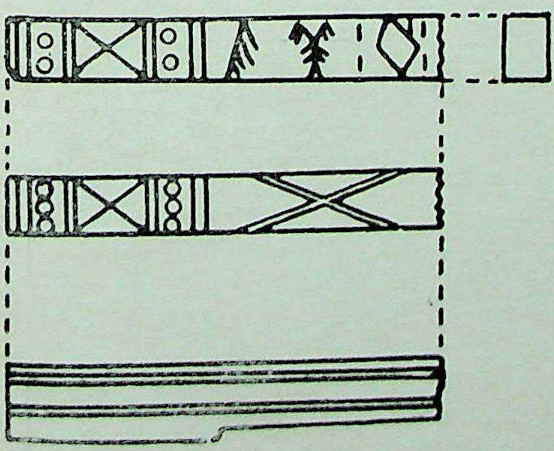

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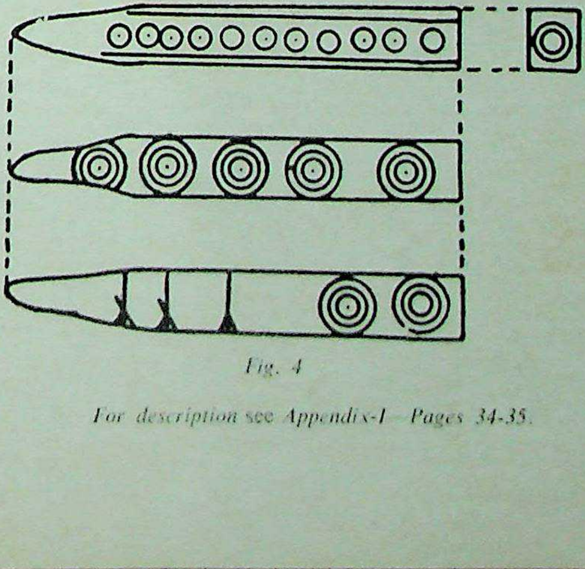

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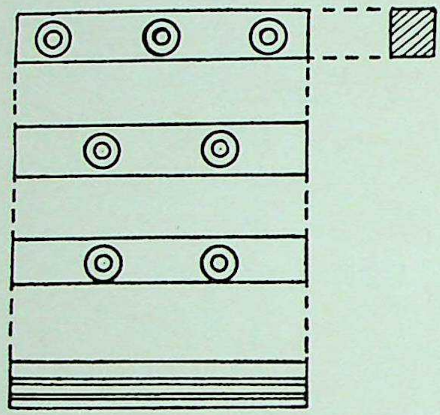

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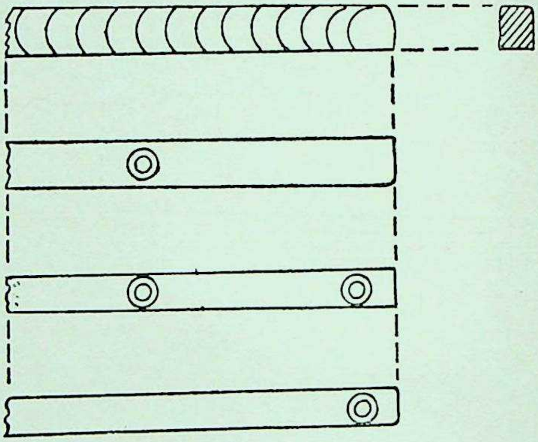

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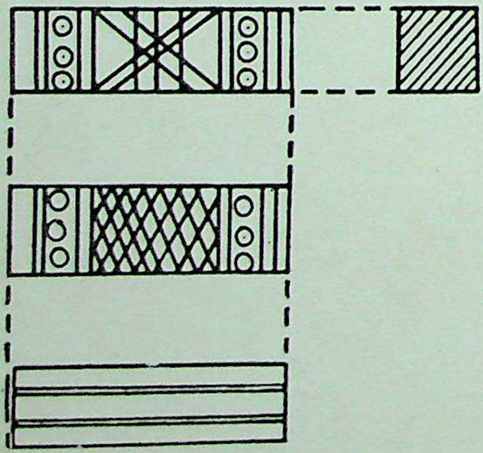

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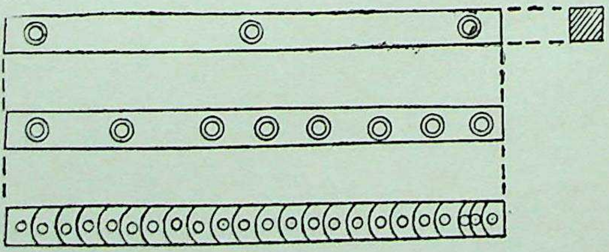

Fig. 4

For description see *Appendix-I—Page* 35.

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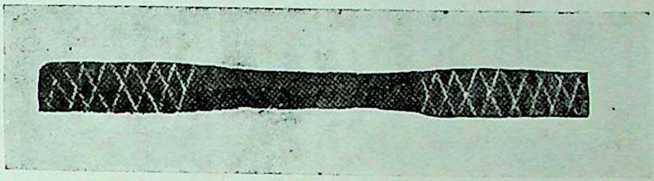

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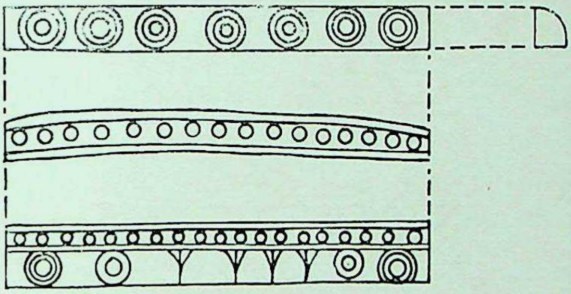

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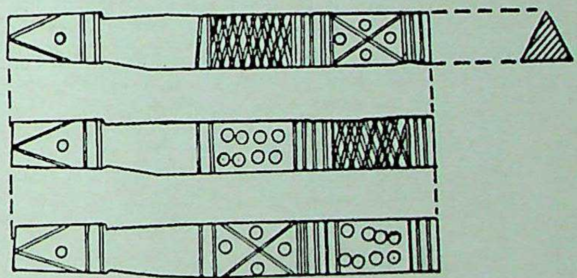

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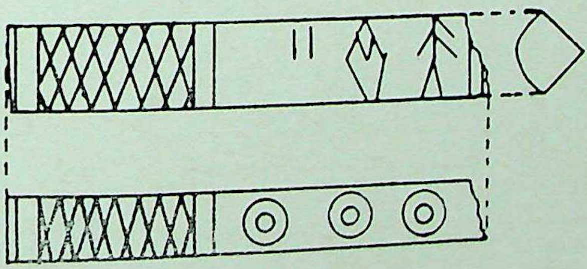

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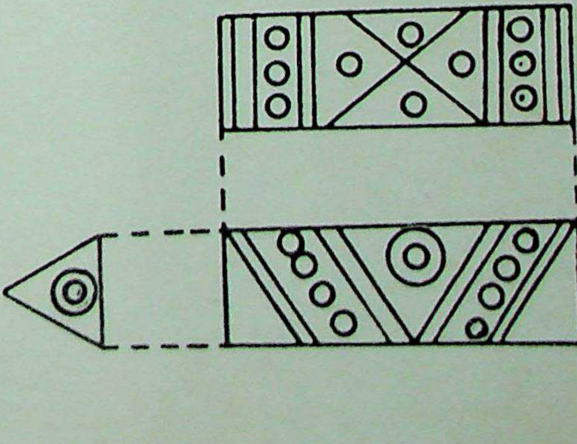
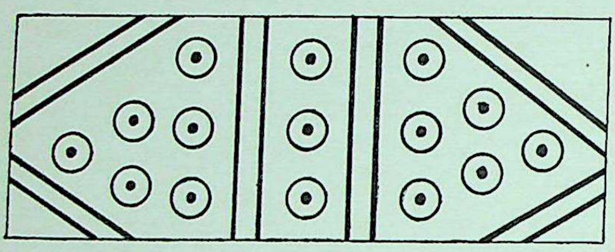


Fig. 5

For description see Appendix I—Page 35.



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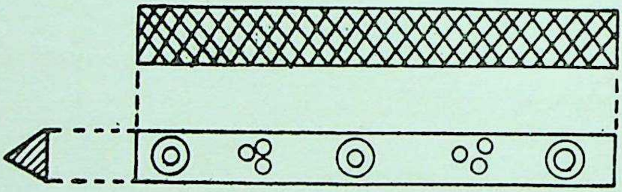

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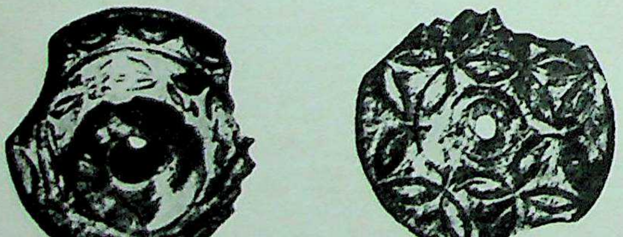

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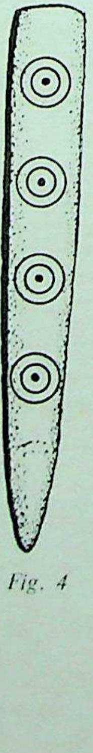

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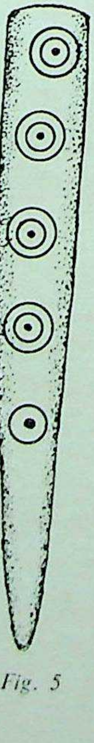

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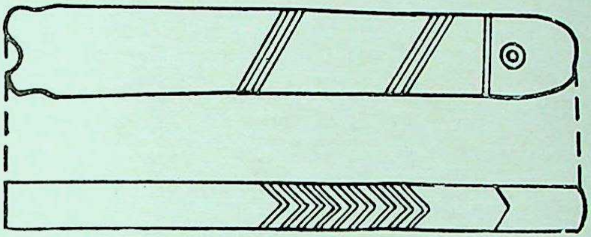

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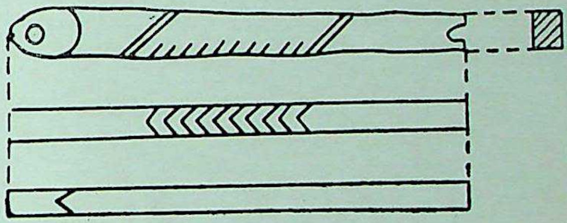

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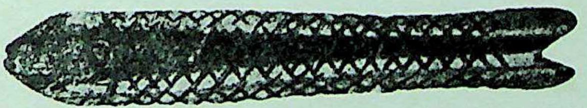

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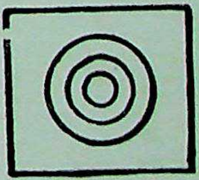

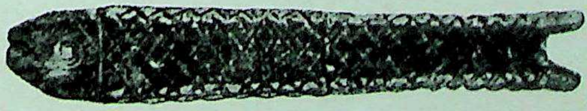

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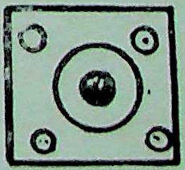
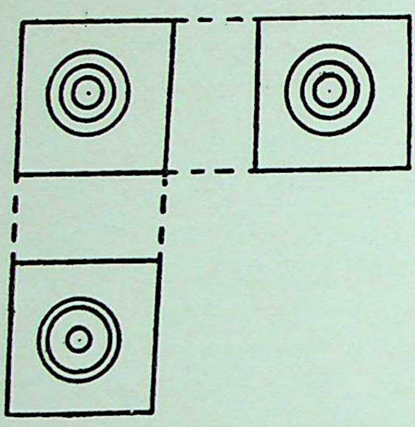


Fig. 5

For description see Appendix-I—Pages 36-37.

Plate VIII



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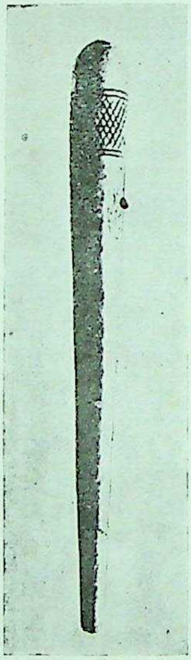

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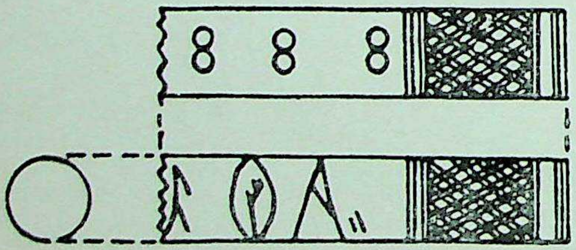

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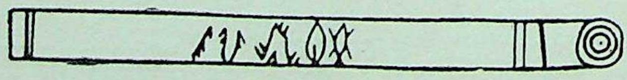

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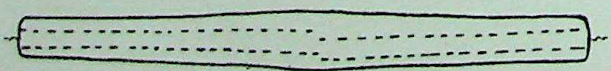

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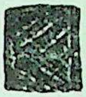
For description see Appendix-I—Pages 37-38.



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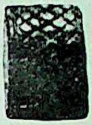

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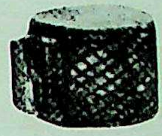

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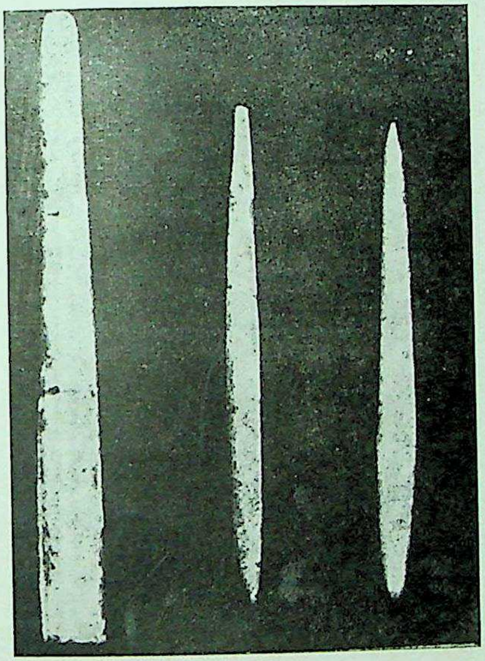

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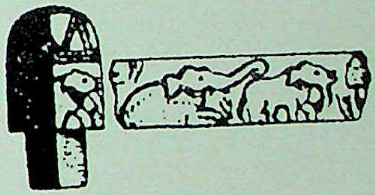

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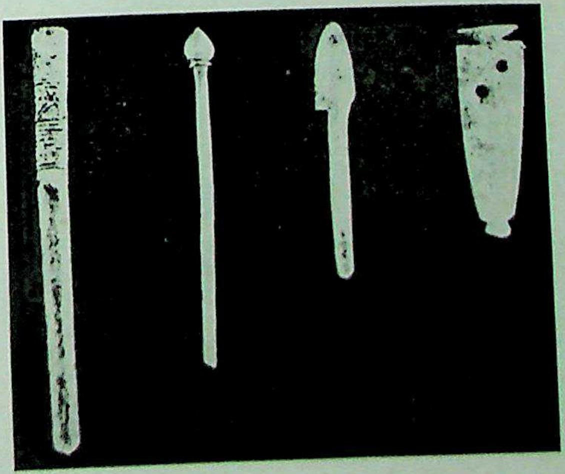

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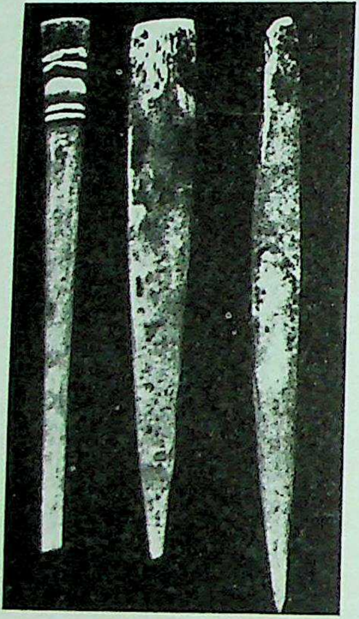
For description see Appendix-I—Pages 38 & 40.



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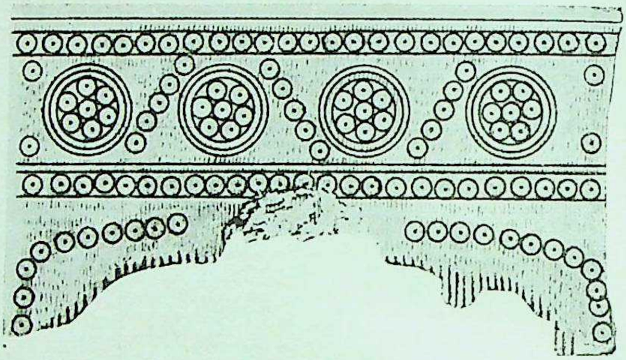

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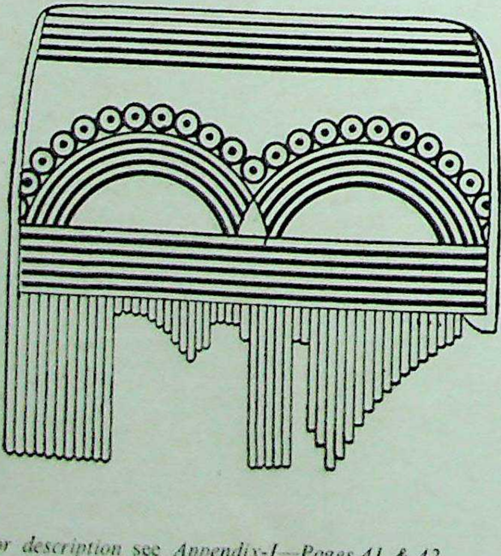

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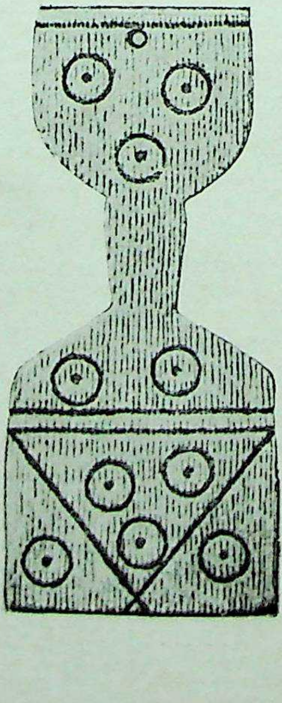

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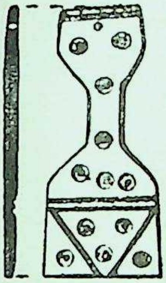
For description see Appendix-I—Pages 41 & 42.



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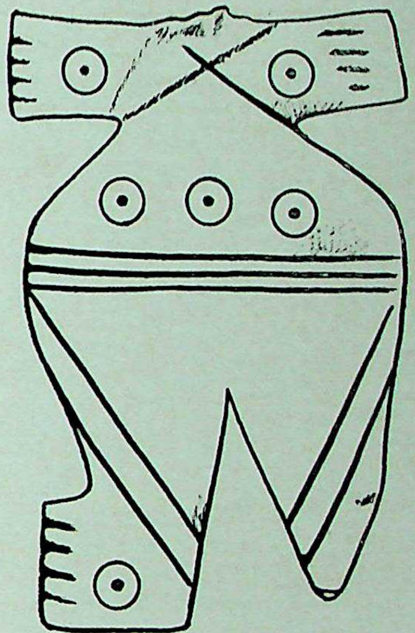

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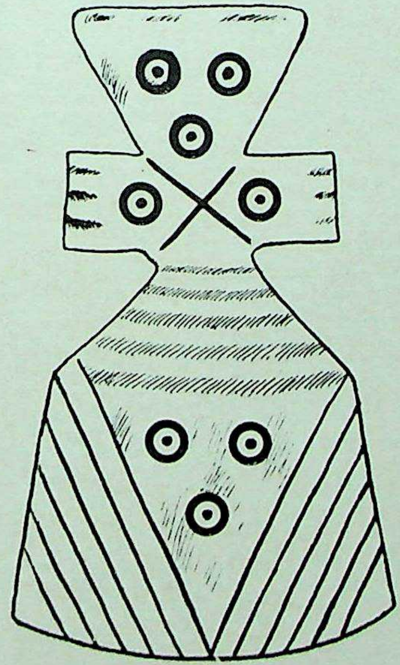

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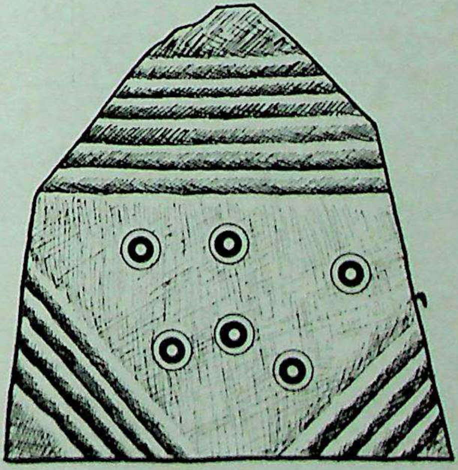
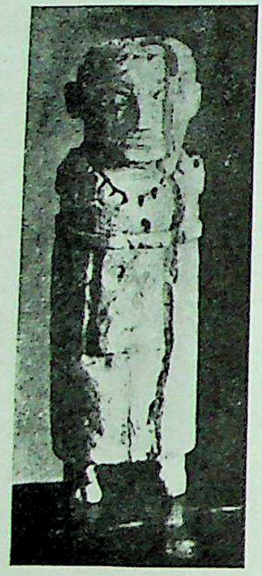


Fig. 4

For description see Appendix-I — Page 42



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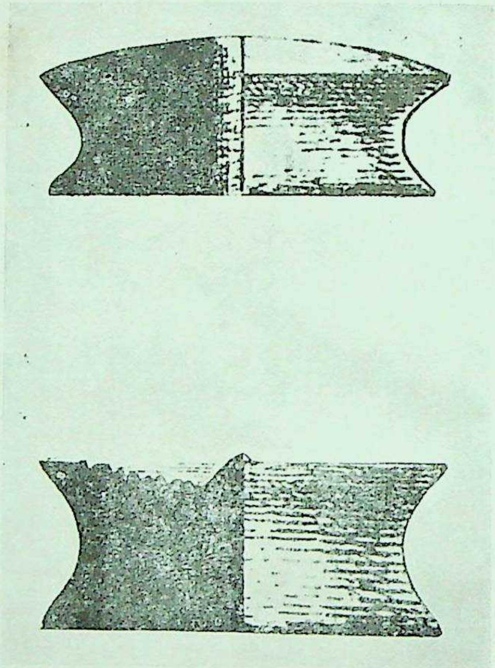

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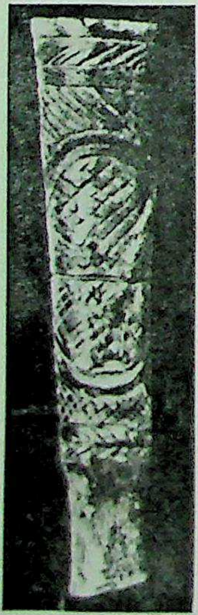

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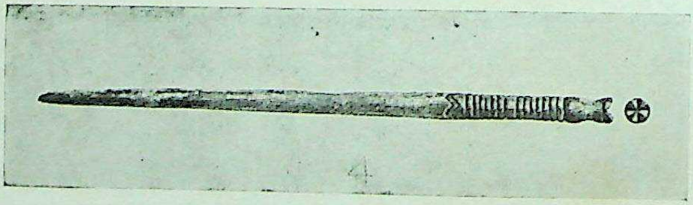

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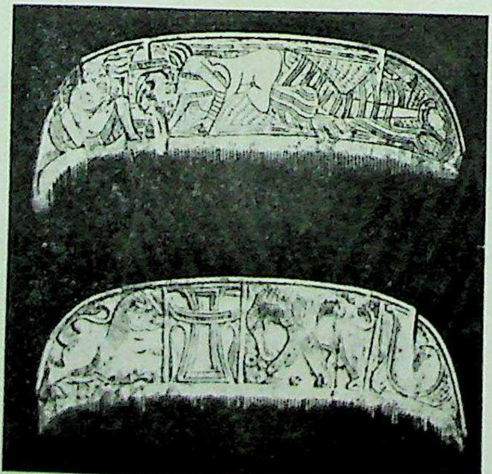
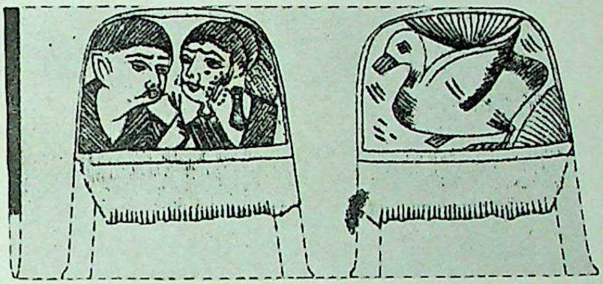


Fig. 5

For description see Appendix-I—Pages 42, 43 & 44.



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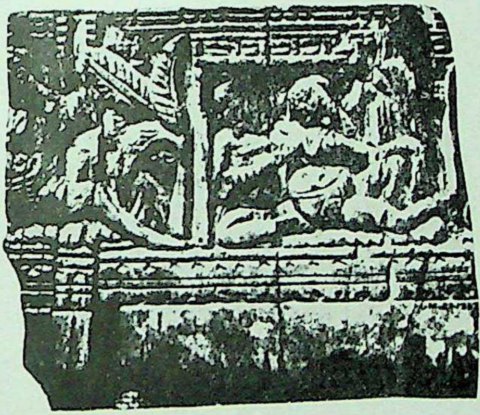

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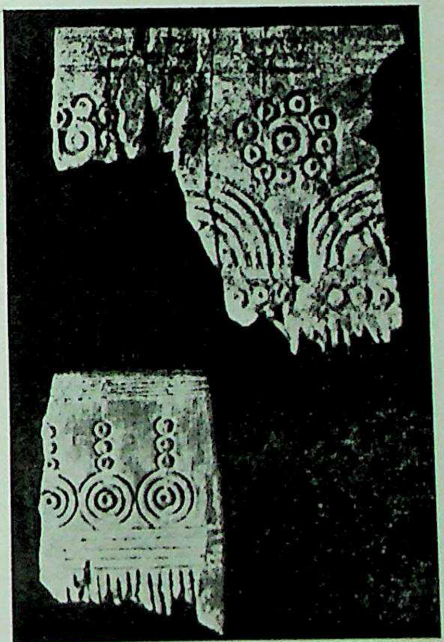

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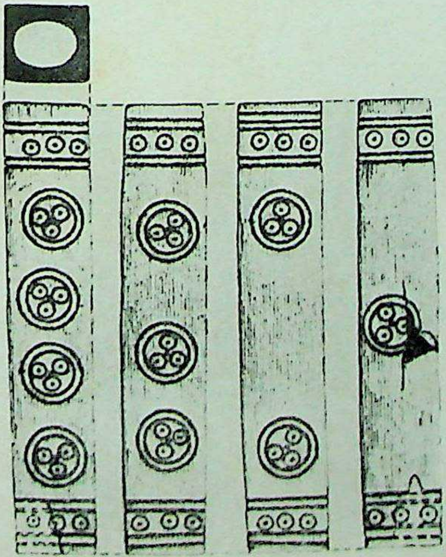
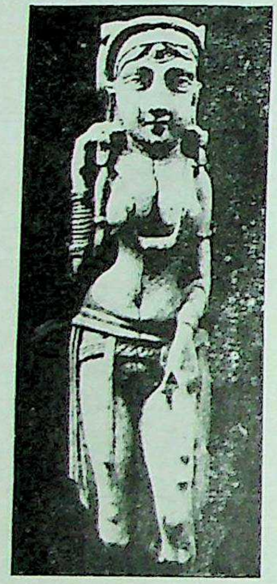


Fig. 4

For description see Appendix-I—Pages 45 & 46.



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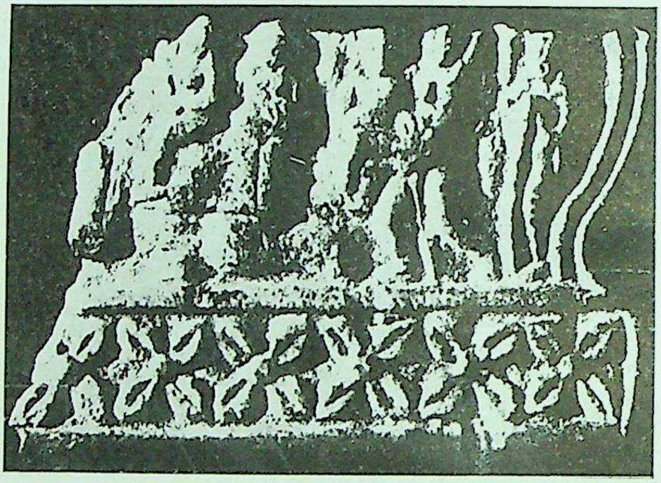

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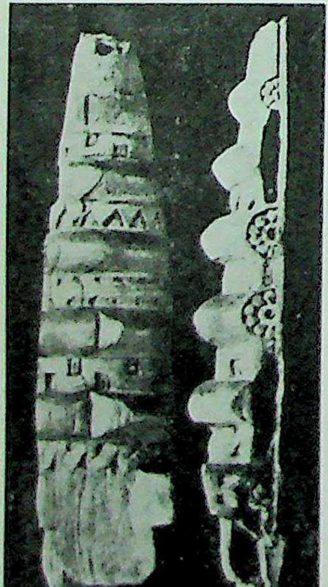

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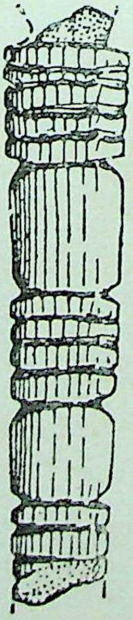
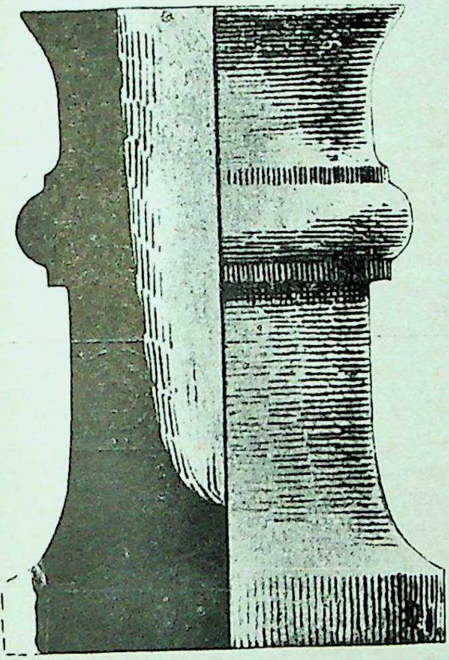


Fig. 4

For description see *Appendix-I—Pages 46 & 47.*



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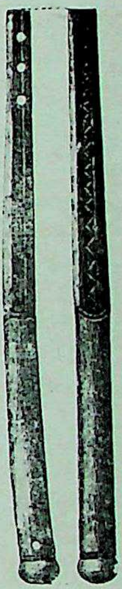


Fig. 2

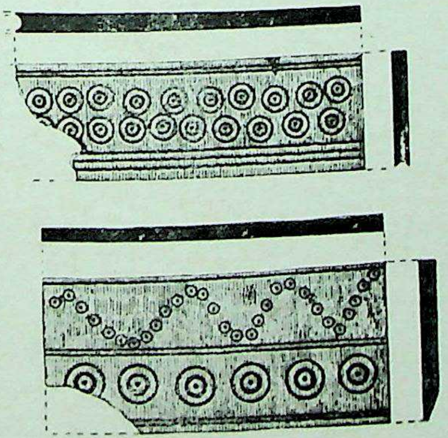


Fig. 3

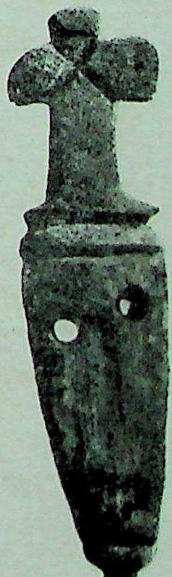


Fig. 4

For description see Appendix-I—Pages 47 & 48.

Plate XVI

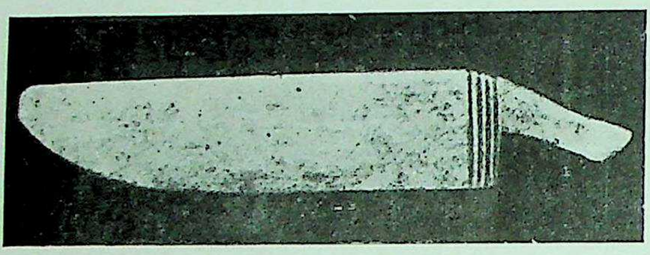


Fig. 1

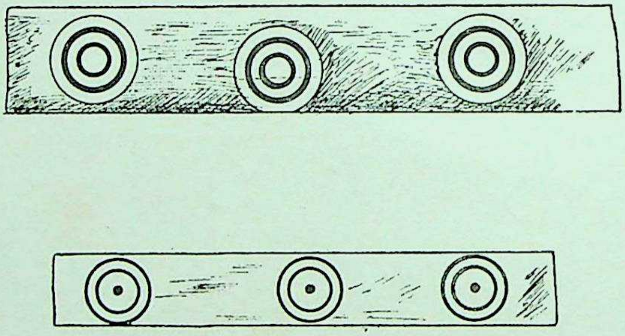


Fig. 2

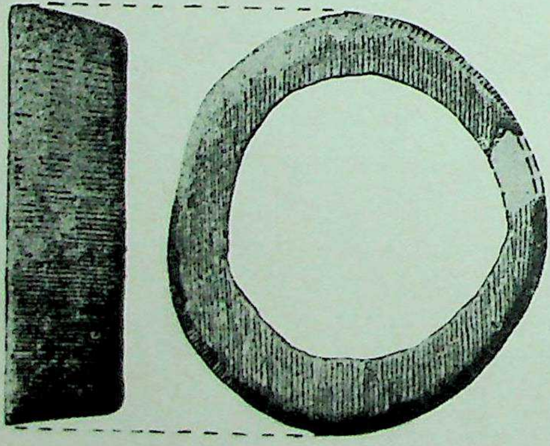
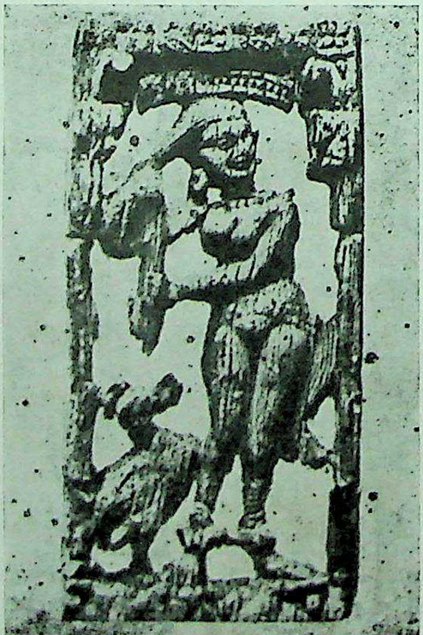


Fig. 3

Fig. 4



For description see Appendix-I—Pages 48 & 49.

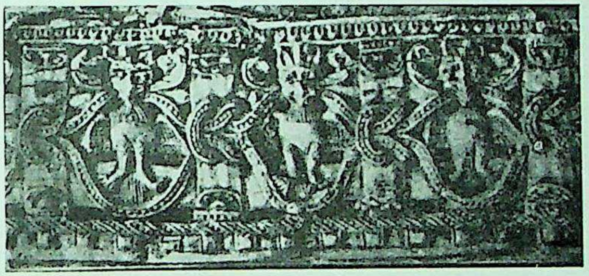


Fig. 1

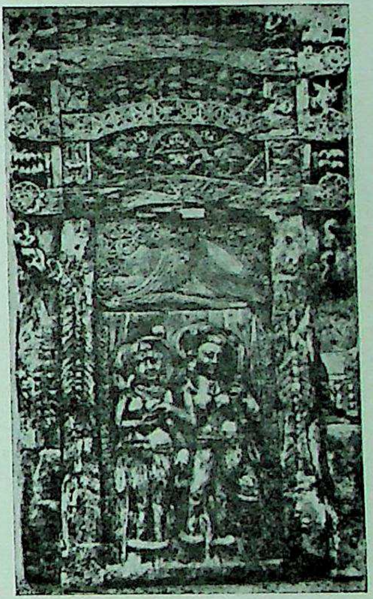


Fig. 2

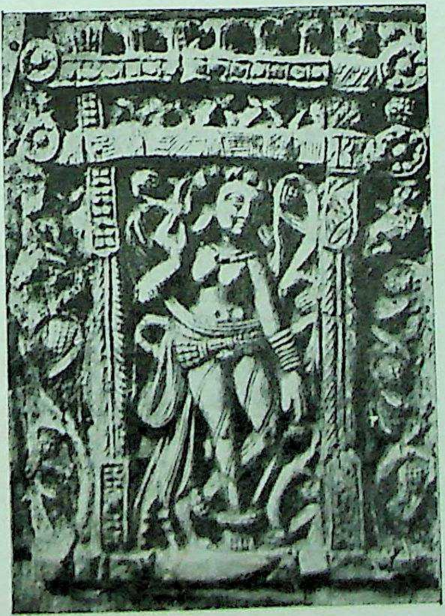


Fig. 3

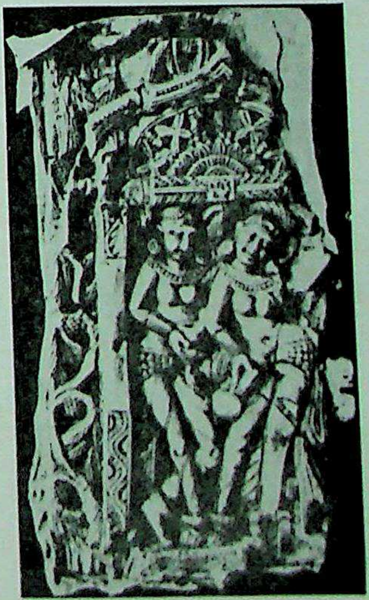


Fig. 4

For description see Appendix-I—Pages 48—52.

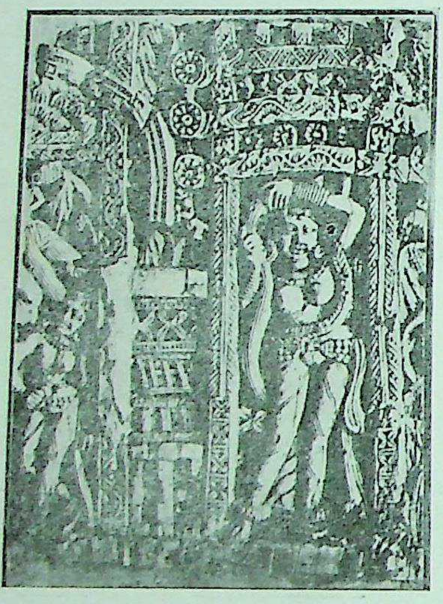


Fig. 1

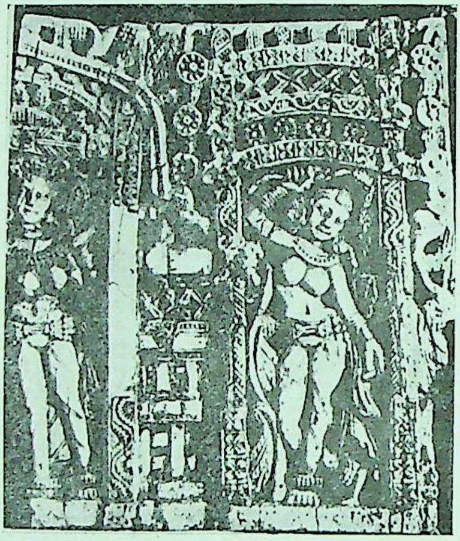


Fig. 2

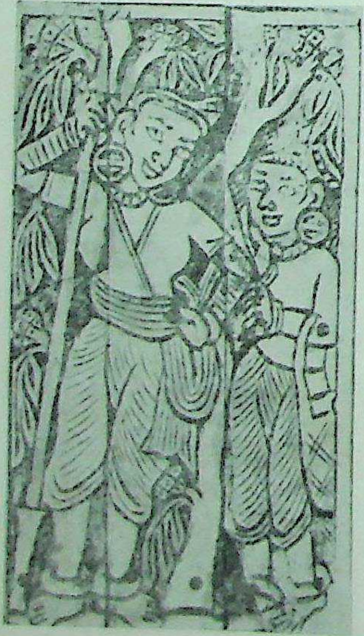


Fig. 3

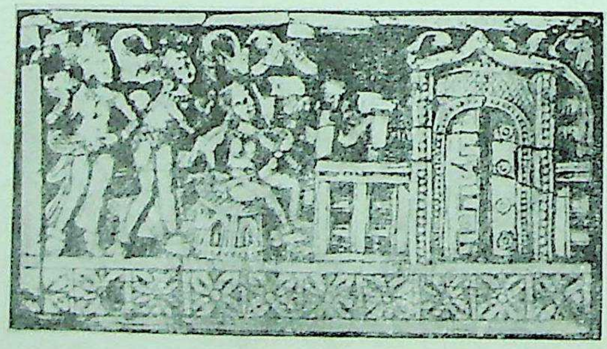


Fig. 4

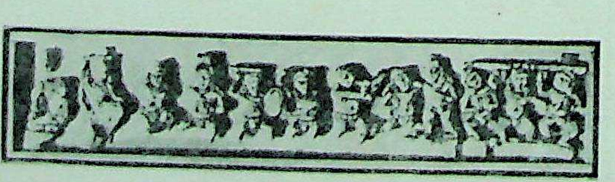


Fig 5

For description see Appendix-I—Pages 48—52

Plate XIX

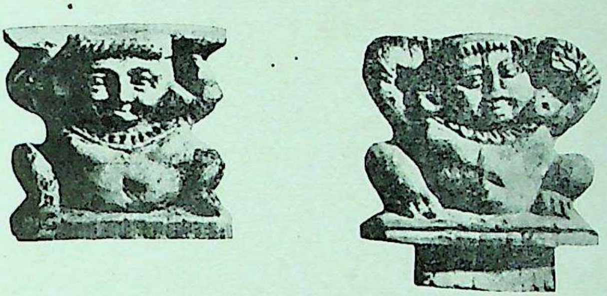


Fig. 1

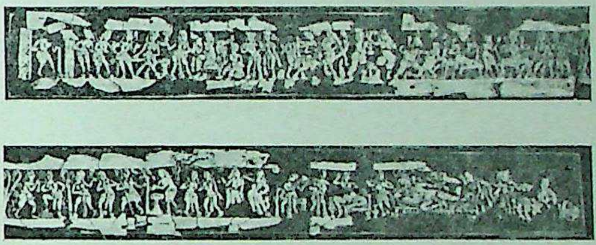


Fig. 2

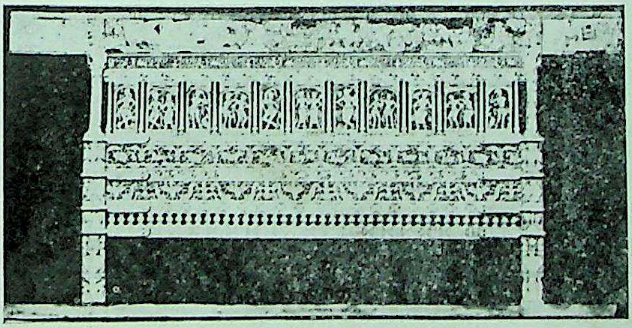


Fig. 3

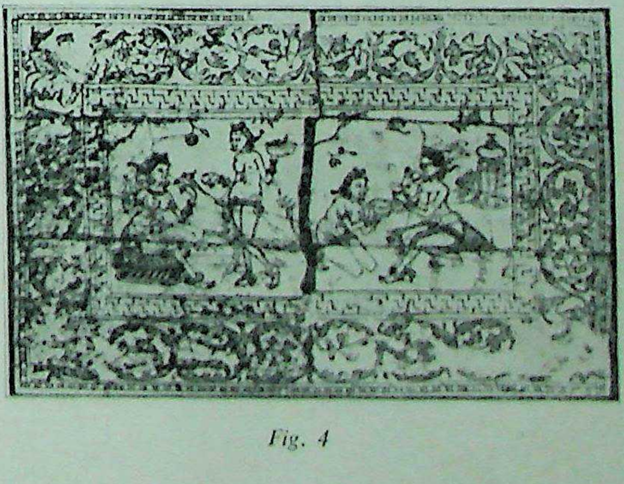


Fig. 4

For description see Appendix-I—Pages 48—52.

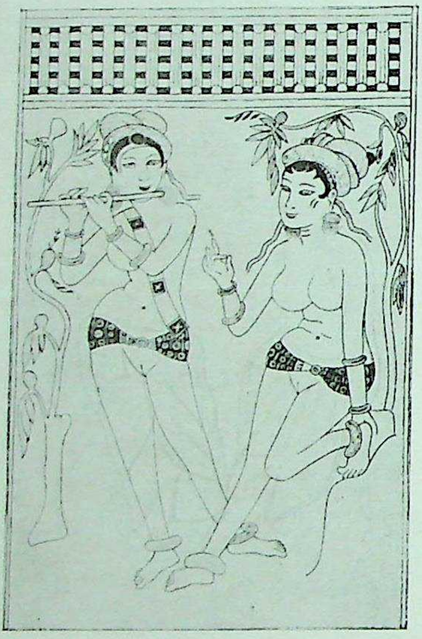


Fig. 1

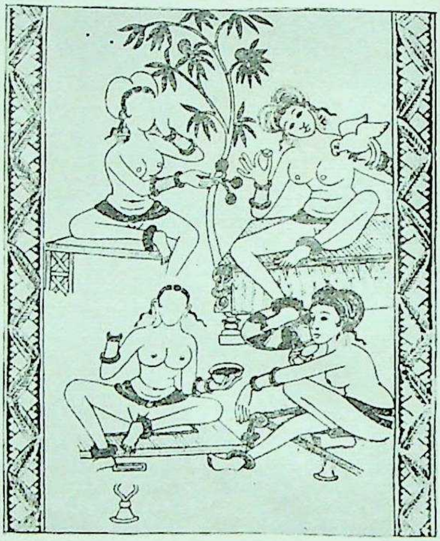


Fig. 2

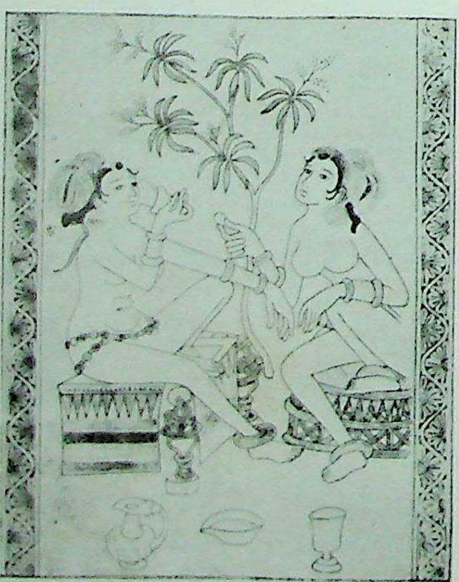


Fig. 3

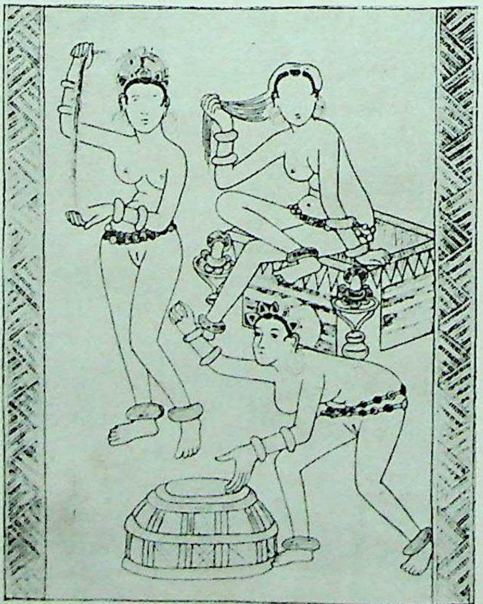


Fig. 4

For description see Appendix-I—Pages 48—52.

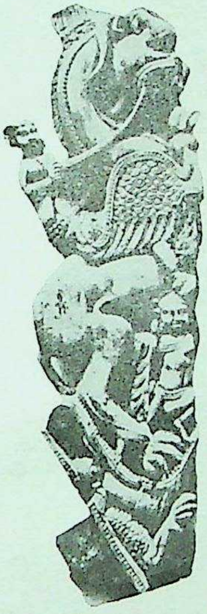


Fig. 1

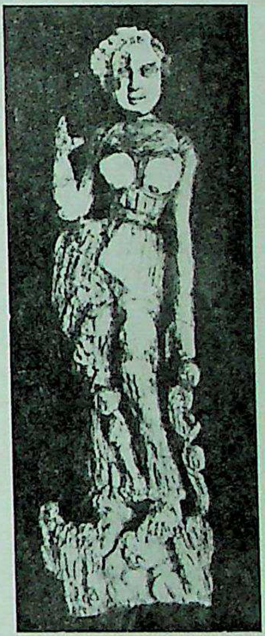


Fig. 2

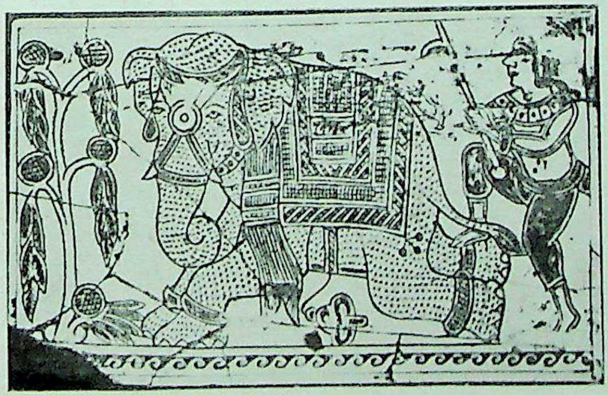


Fig. 3

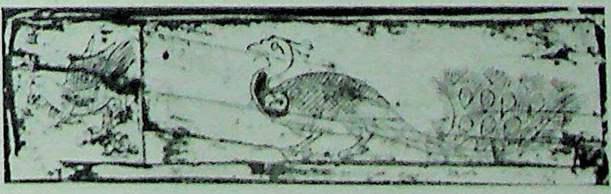


Fig. 4

For description see Appendix-I—Pages 48—52.

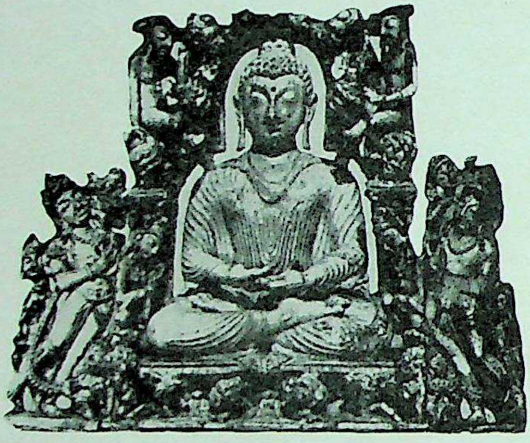


Fig. 1

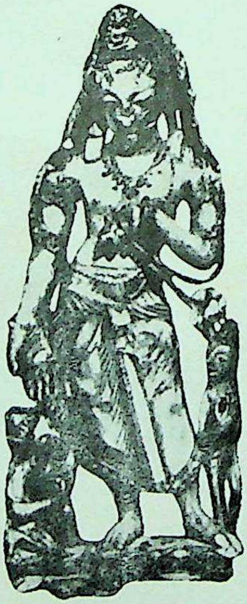


Fig. 2

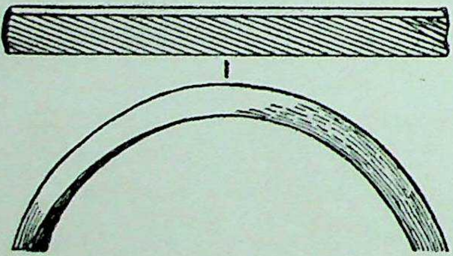


Fig. 3

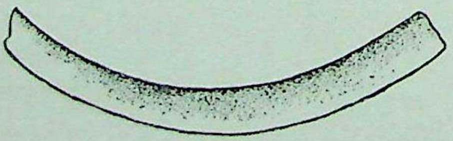


Fig. 4

For description see Appendix-I—Pages 53—55.

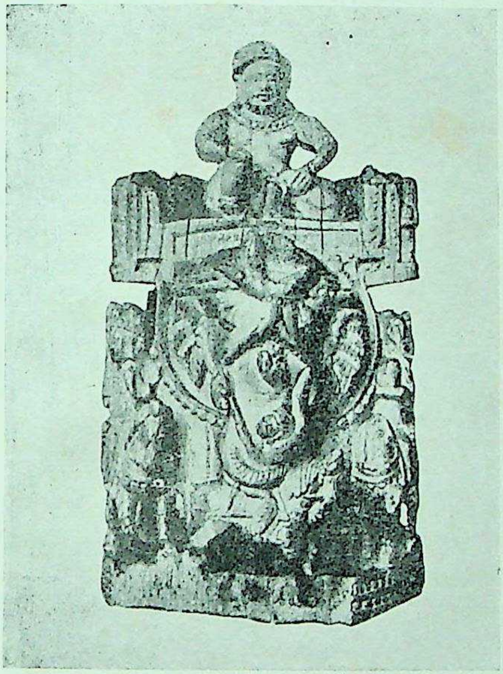


Fig. 1

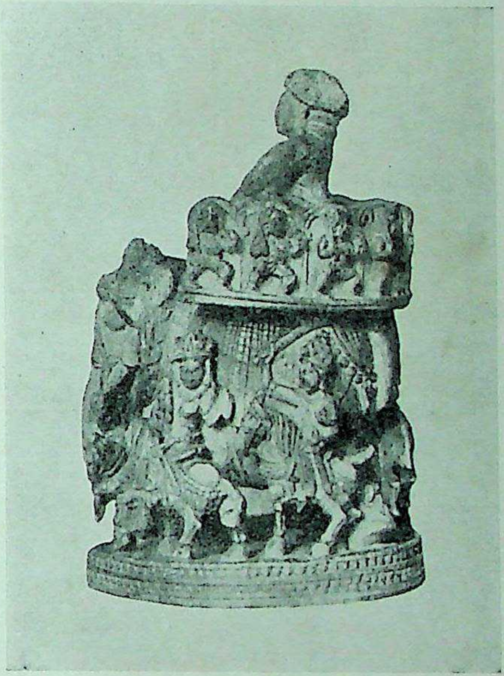


Fig. 2

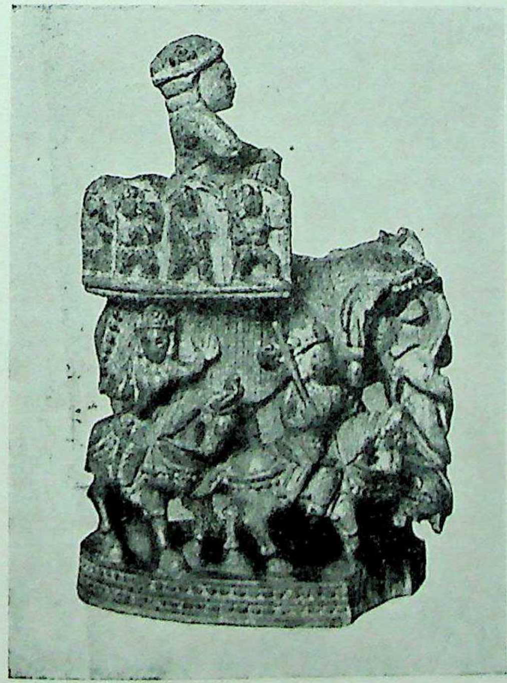


Fig. 3

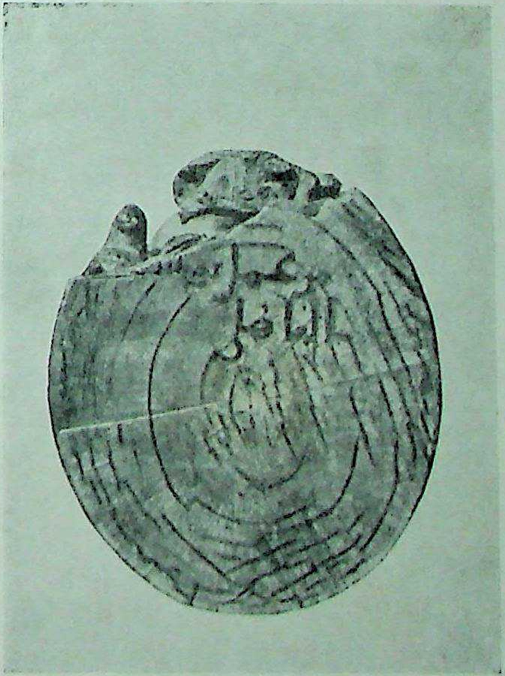


Fig. 4

For description see Appendix-I—Page 55.

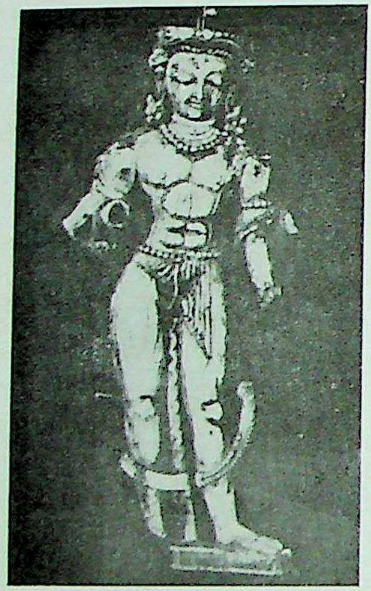


Fig. 1

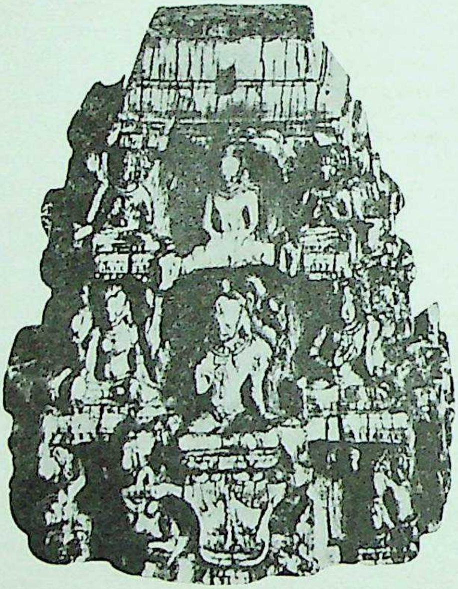


Fig. 3

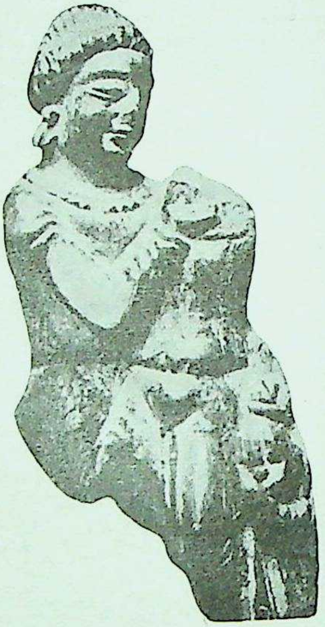


Fig. 2

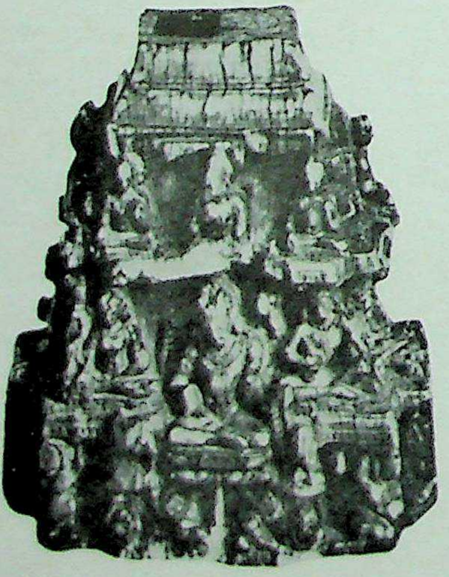


Fig. 4

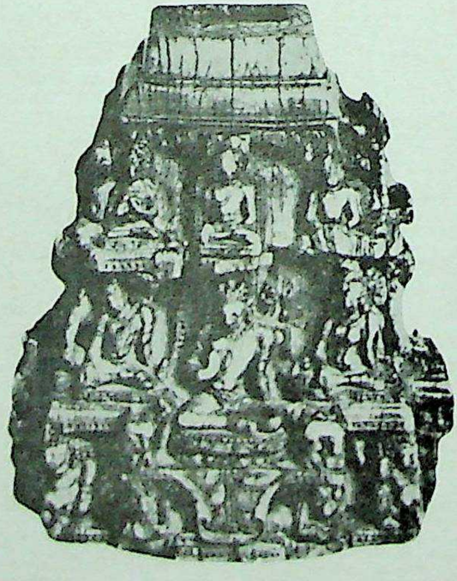


Fig. 5

For description see Appendix-I—Page 56.

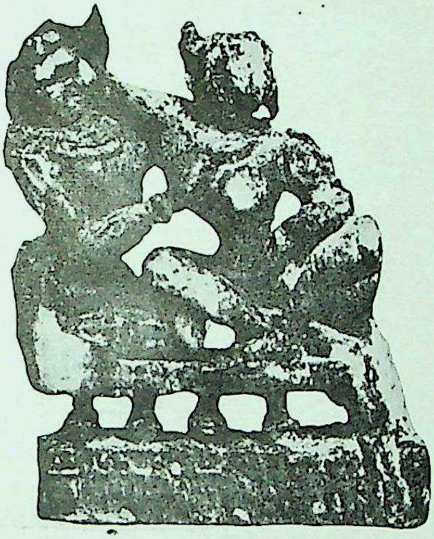


Fig. 1

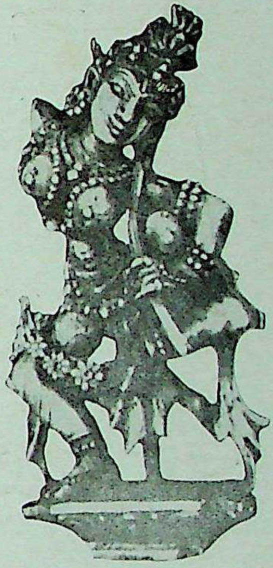


Fig. 2

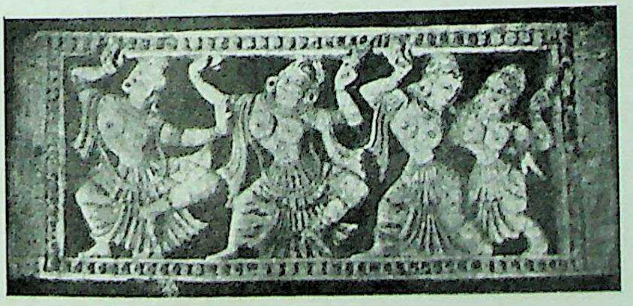


Fig. 3

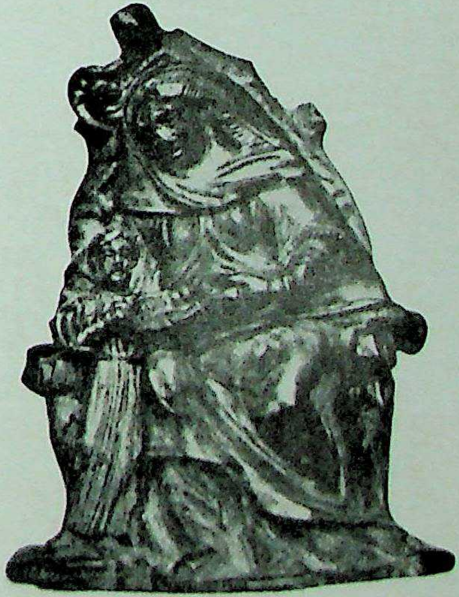


Fig. 4

For description see Appendix-I—Pages 57—59.

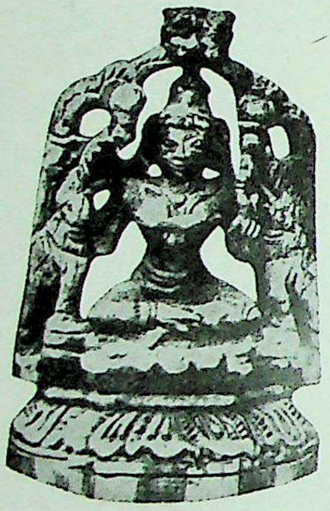


Fig 1

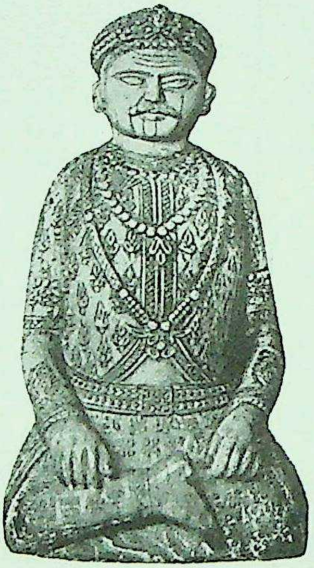


Fig. 2

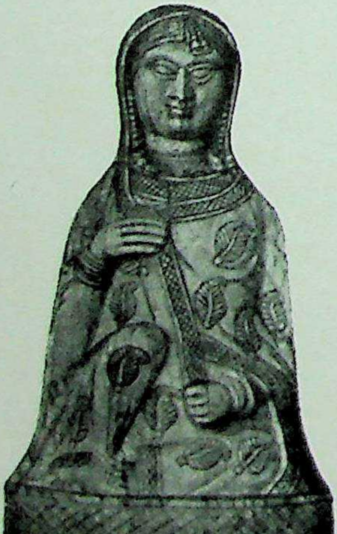


Fig. 3

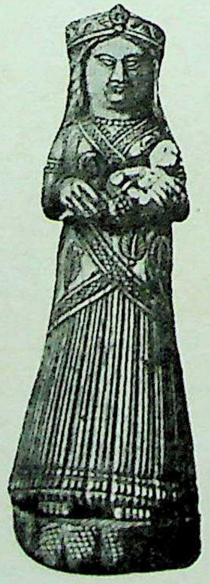


Fig. 4

For description see Appendix-I—Page 60.

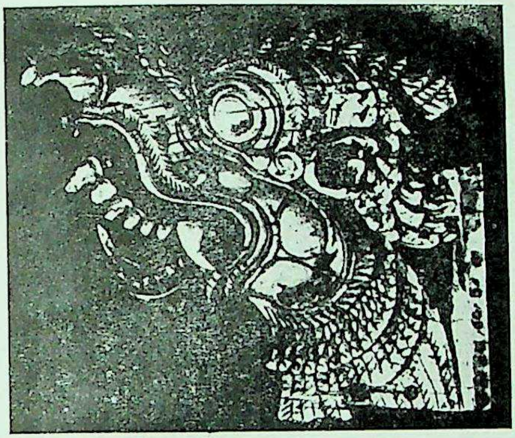
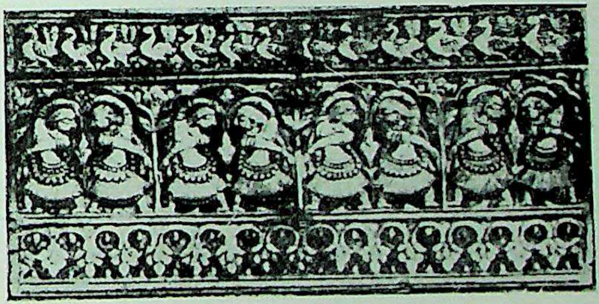


Fig. 1



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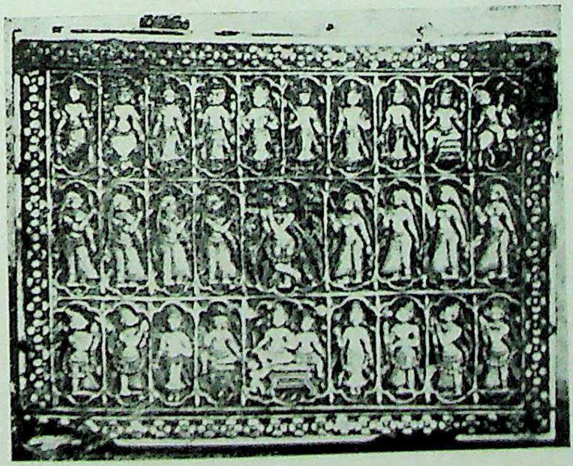


For description see Appendix-I—Page 60.

Fig. 3

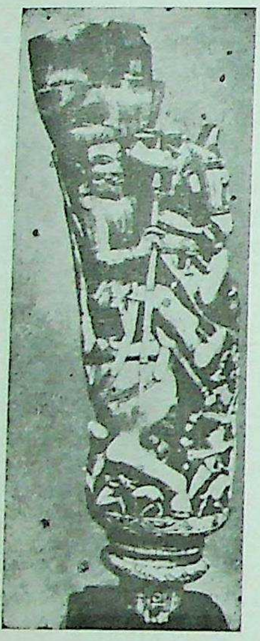


Fig. 1

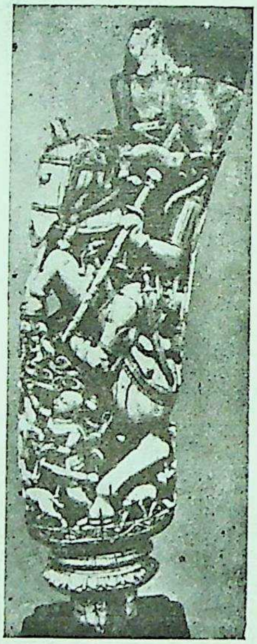


Fig. 2

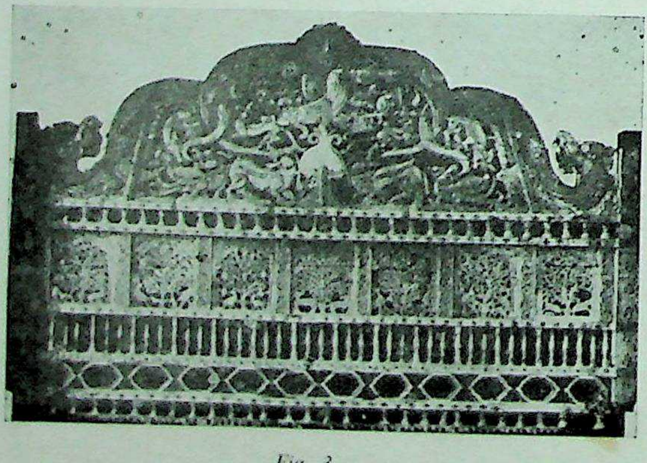


Fig. 3

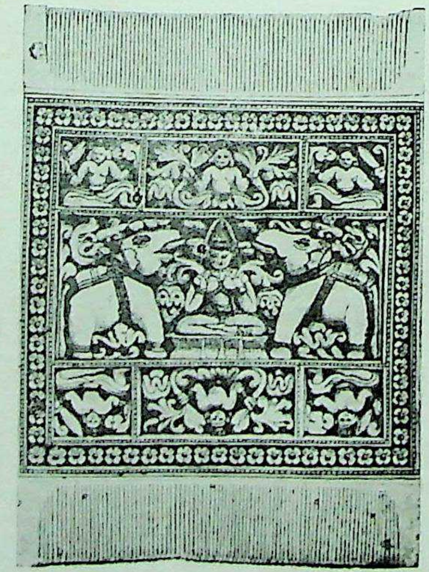


Fig. 4

For description see Appendix-I—Pages 61—64

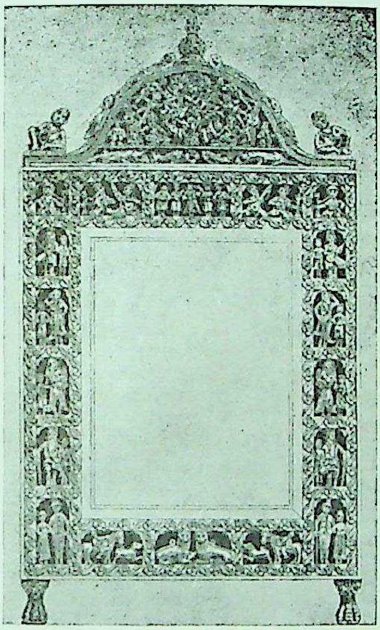


Fig. 1

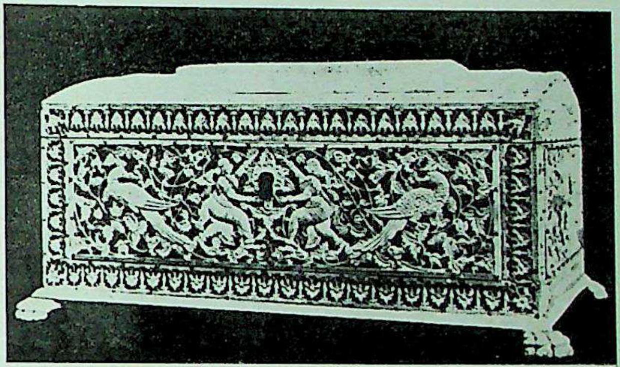


Fig. 2

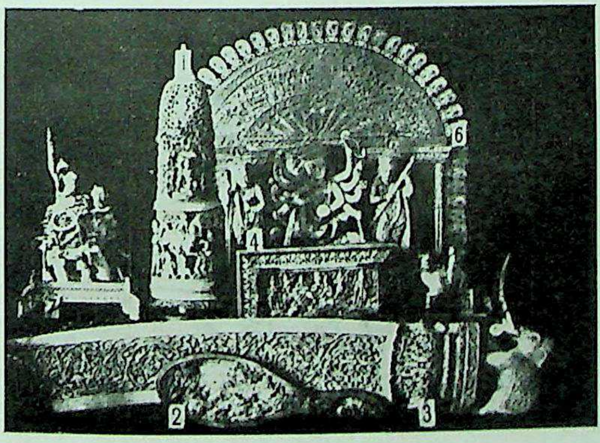


Fig. 3

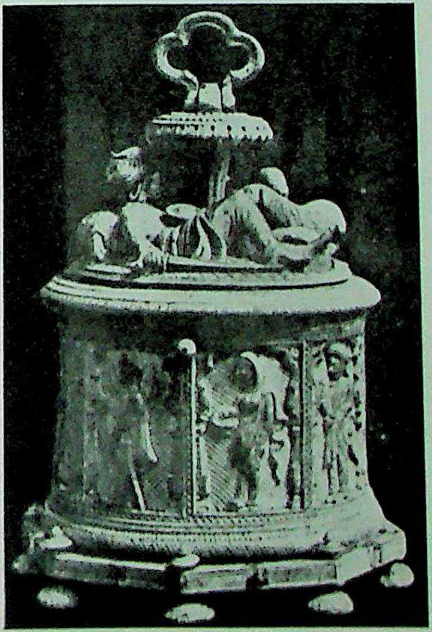


Fig. 4

For description see Appendix-I—Pages 65 & 67.

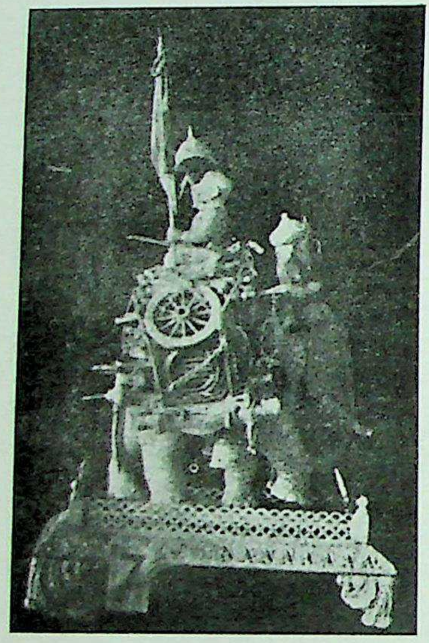


Fig. 1

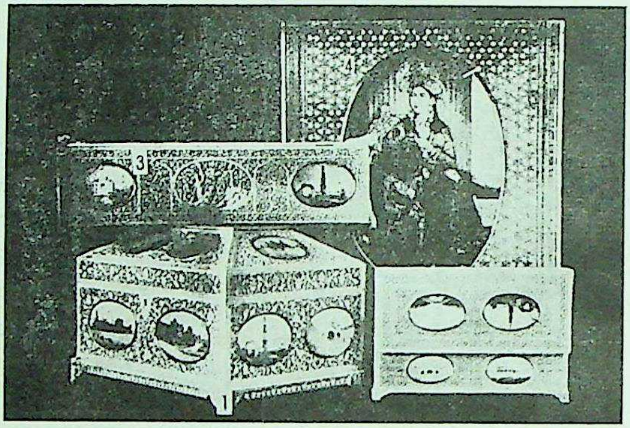


Fig. 2

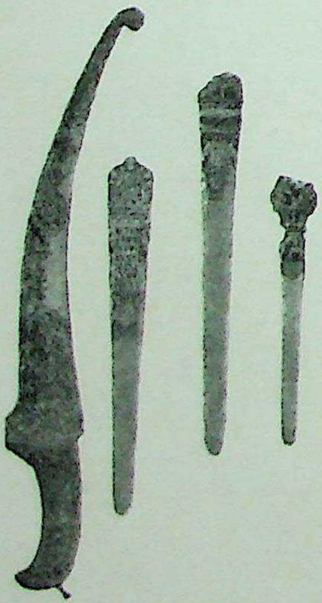


Fig. 3

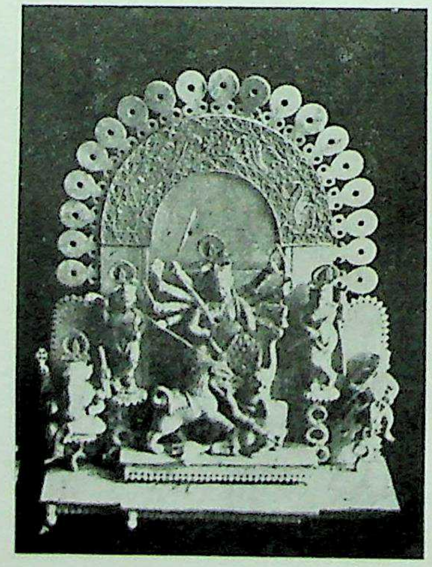


Fig. 4

For description see Appendix-I—Pages 67—69.

Plate XXXI

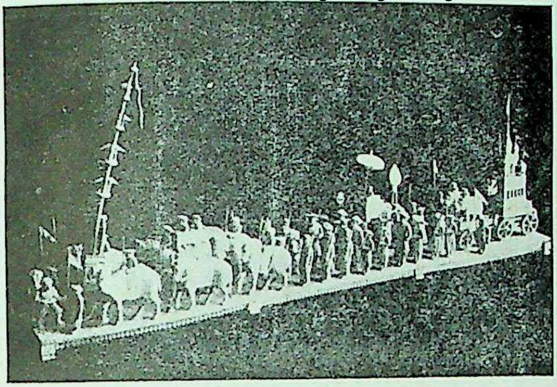


Fig. 1

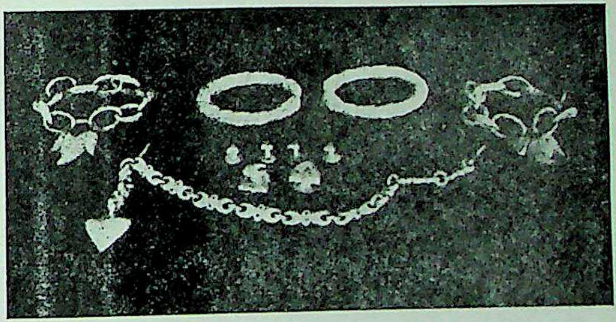


Fig. 2

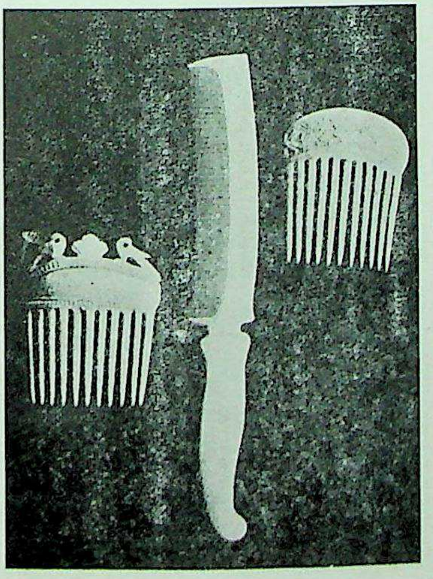


Fig. 3

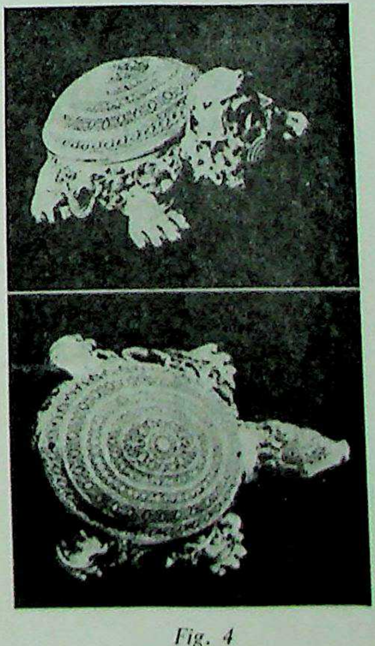


Fig. 4

For description see Appendix-I—Pages 69, 70 & 72.

Plate XXXII

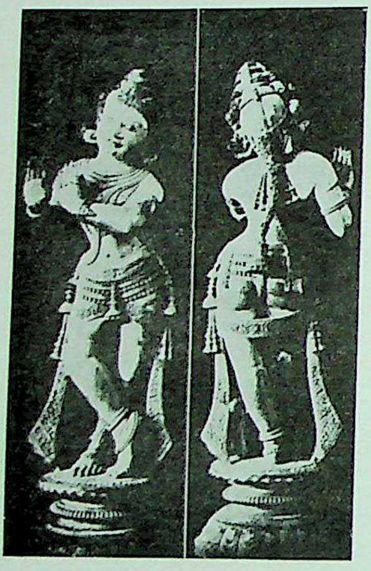


Fig. 1

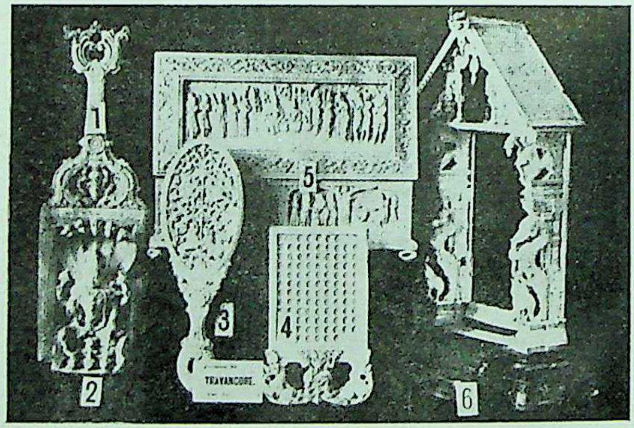

1
2
3
4
5
6
TRAVANCORE.

Fig. 2

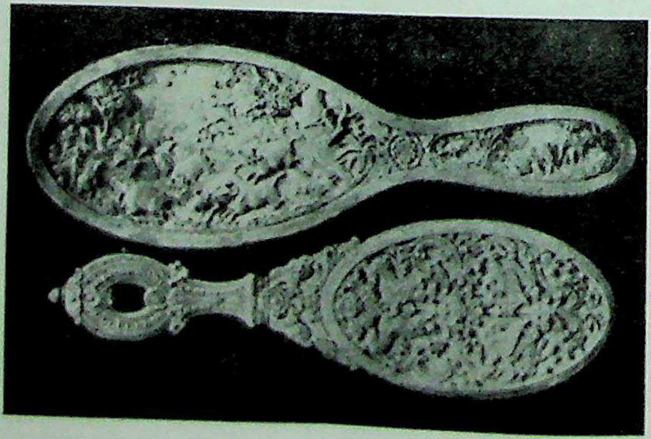


Fig. 3

For description see *Appendix-I—Pages 72—74*·

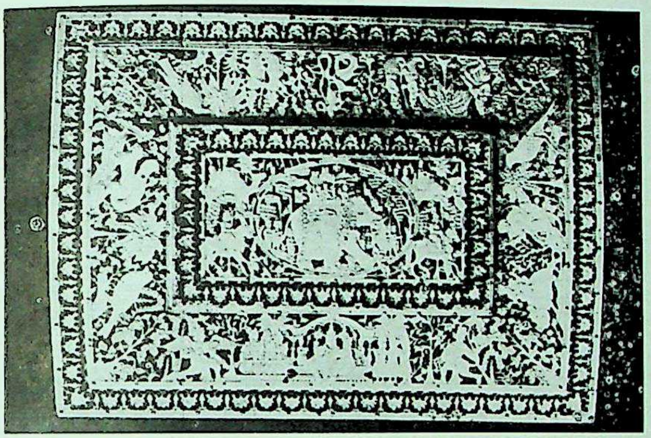


Fig. 1

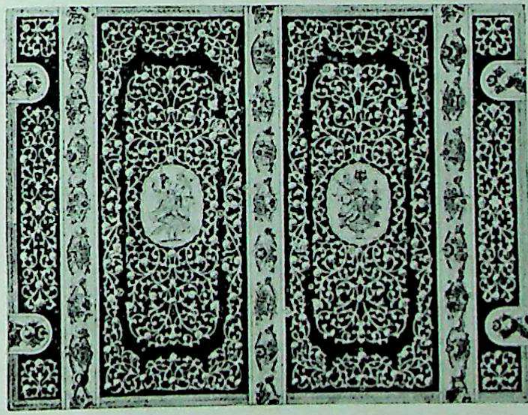


Fig. 2

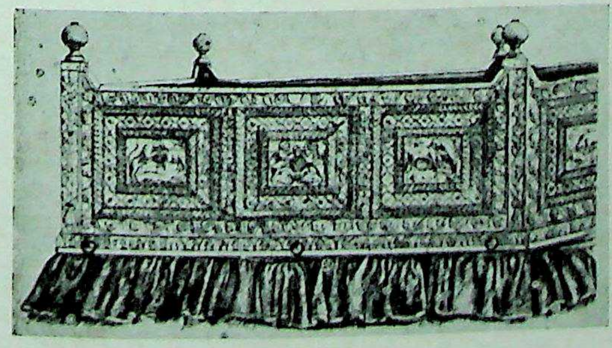
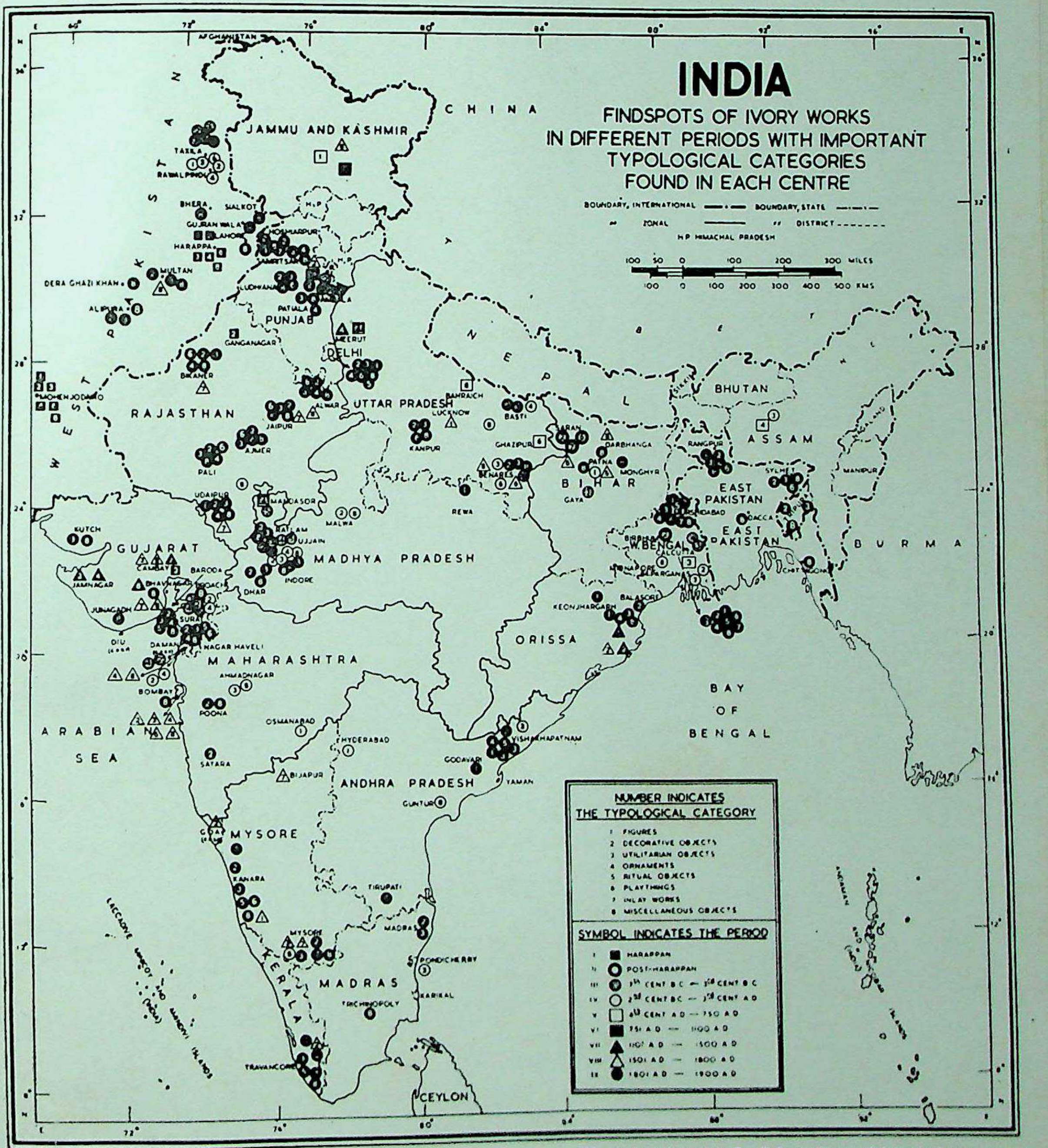


Fig. 3

For description see Appendix-I—Pages 75 & 77.



INDIA

FINDSPOTS OF IVORY WORKS IN DIFFERENT PERIODS WITH IMPORTANT TYPOLOGICAL CATEGORIES FOUND IN EACH CENTRE

BOUNDARY, INTERNATIONAL
BOUNDARY, STATE
ZONAL
DISTRICT
H.P. HIMACHAL PRADESH
100 50 0 100 200 300 MILES
100 0 100 200 300 400 500 KMS
NUMBER INDICATES THE TYPOLOGICAL CATEGORY
1 FIGURES
2 DECORATIVE OBJECTS
3 UTILITARIAN OBJECTS
4 ORNAMENTS
5 RITUAL OBJECTS
6 PLAYTHINGS
7 INLAY WORKS
8 MISCELLANEOUS OBJECTS
SYMBOL INDICATES THE PERIOD
I HARAPPAN
II POST-HARAPPAN
III 5th CENT B C — 3rd CENT B C
IV 2nd CENT B C — 3rd CENT A D
V 4th CENT A D — 750 A D
VI 751 A D — 1100 A D
VII 1101 A D — 1500 A D
VIII 1501 A D — 1800 A D
IX 1801 A D — 1900 A D
AFGHANISTAN
CHINA
JAMMU AND KASHMIR
WEST PAKISTAN
TAXILA
RAWALPINDI
BHERA
SIALKOT
GUJRANWALA
LAHORE
HARAPPA
MULTAN
DERA GHAZI KHAN
ALIPURA
MOHENJODARO
HOSHIARPUR
AMRITSAR
LUDHIANA
PATIALA
PUNJAB
H.P.
GANGANAGAR
MEERUT
DELHI
BIKANER
RAJASTHAN
ALWAR
JAIPUR
AJMER
PALI
UDAIPUR
MANDASOR
RATLAM
UJJAIN
INDORE
DHAR
MALWA
MADHYA PRADESH
UTTAR PRADESH
LUCKNOW
BAHRAICH
KANPUR
BASTI
GHAZIPUR
BENARES
REWA
NEPAL
BHUTAN
SARAN
DARBHANGA
PATNA
MONGHYR
GAYA
BIHAR
ASSAM
RANGPUR
SYLHET
MANIPUR
EAST PAKISTAN
DACCA
MURSHIDABAD
BIRBHUM
W. BENGAL
CALCUTTA
MIDNAPORE
24 PARGANAS
CHITTAGONG
BURMA
KEONJHARGARH
BALASORE
ORISSA
KUTCH
GUJARAT
CAMBAY
BARODA
BROACH
BHAVNAGAR
JAMNAGAR
JUNAGADH
SURAT
DIU
DAMAN
NAGAR HAVELI
MAHARASHTRA
AHMADNAGAR
BOMBAY
POONA
OSMANABAD
HYDERABAD
SATARA
BIJAPUR
ANDHRA PRADESH
GODAVARI
VISHAKHAPATNAM
YANAM
GUNTUR
ARABIAN SEA
BAY OF BENGAL
GOA
MYSORE
KANARA
TIRUPATI
MADRAS
PONDICHERRY
KARIKAL
TIRUCHIRAPOLY
KERALA
TRAVANCORE
CEYLON
LACCADIVE MINICOY AND AMINDIVI ISLANDS
ANDAMAN AND NICOBAR ISLANDS
72°
76°
80°
84°
88°
92°
96°
36°
32°
28°
24°
20°
16°
12°
8°

BASED UPON SURVEY OF INDIA MAP WITH THE PERMISSION OF THE SURVEYOR GENERAL OF INDIA

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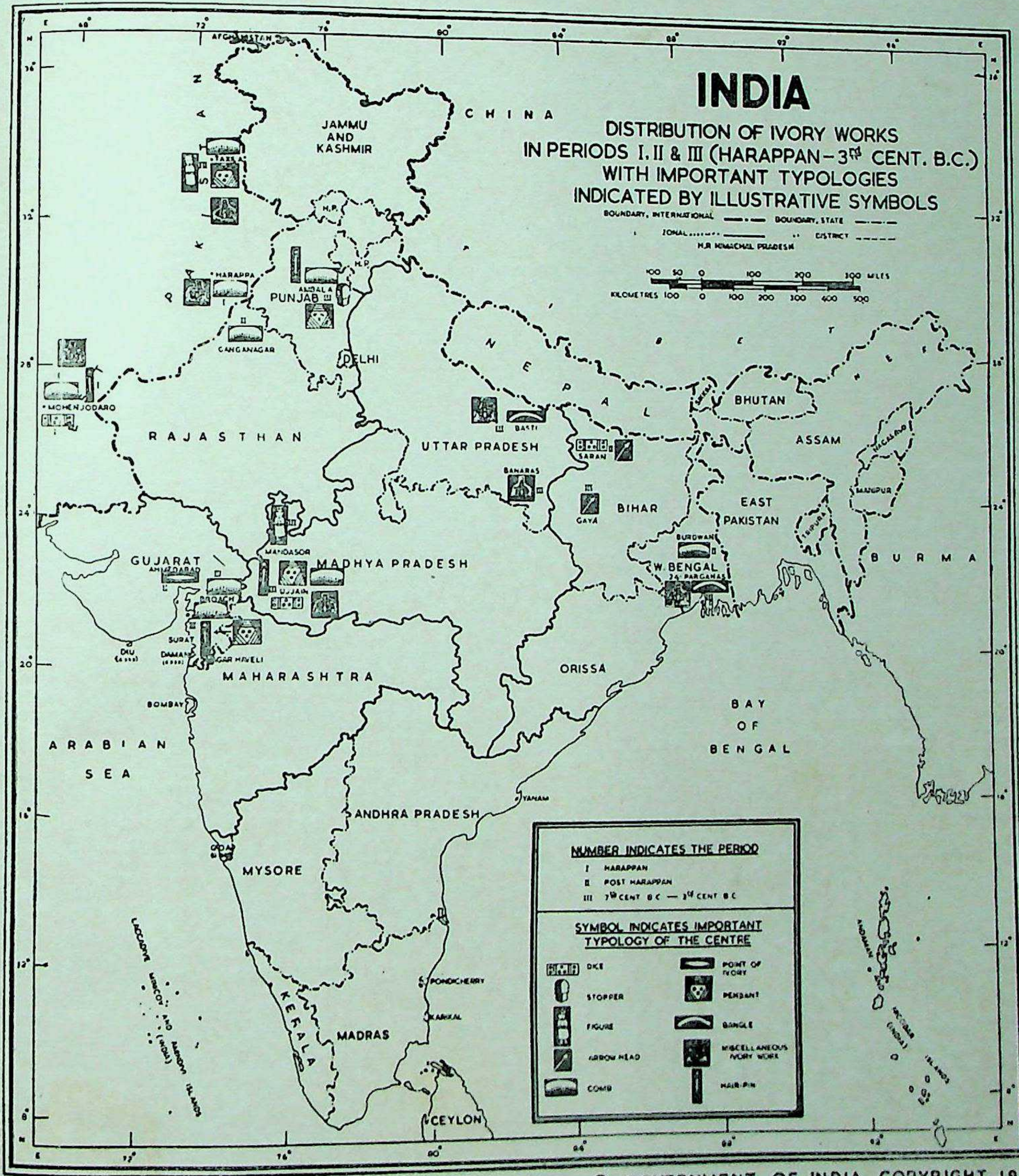
The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line


INDIA
DISTRIBUTION OF IVORY WORKS
IN PERIODS I, II & III (HARAPPAN – 3rd CENT. B.C.)
WITH IMPORTANT TYPOLOGIES
INDICATED BY ILLUSTRATIVE SYMBOLS
BOUNDARY, INTERNATIONAL
BOUNDARY, STATE
ZONAL
DISTRICT
H.P. HIMACHAL PRADESH
100 50 0 100 200 300 MILES
KILOMETRES 100 0 100 200 300 400 500
NUMBER INDICATES THE PERIOD
I HARAPPAN
II POST HARAPPAN
III 7th CENT B C — 3rd CENT B C
SYMBOL INDICATES IMPORTANT TYPOLOGY OF THE CENTRE
DICE
POINT OF IVORY
STOPPER
PENDANT
FIGURE
BANGLE
ARROW HEAD
MISCELLANEOUS IVORY WORK
COMB
HAIR-PIN
AFGHANISTAN
CHINA
PAKISTAN
JAMMU AND KASHMIR
TAXILA
H.P.
HARAPPA
AMBALA
PUNJAB
GANGANAGAR
DELHI
MOHENJODARO
RAJASTHAN
TIBET
NEPAL
SIKKIM
BHUTAN
BASTI
UTTAR PRADESH
SARAN
BANARAS
GAYA
BIHAR
ASSAM
NAGALAND
MANIPUR
EAST PAKISTAN
TRIPURA
BURDWAN
W. BENGAL
24 PARGANAS
BURMA
MANDASOR
UJJAIN
MADHYA PRADESH
GUJARAT
AHMEDABAD
BROACH
SURAT
DIU
DAMAN
DADRA & NAGAR HAVELI
MAHARASHTRA
BOMBAY
ORISSA
ARABIAN SEA
BAY OF BENGAL
YANAM
ANDHRA PRADESH
GOA
MYSORE
PONDICHERRY
KARIKAL
KERALA
MADRAS
CEYLON
LACCADIVE MINICOY AND AMINDIVI ISLANDS (INDIA)
ANDAMAN
NICOBAR ISLANDS (INDIA)
68° 72° 76° 80° 84° 88° 92° 96°
36° 32° 28° 24° 20° 16° 12° 8°

BASED UPON SURVEY OF INDIA MAP WITH THE PERMISSION OF THE SURVEYOR GENERAL OF INDIA

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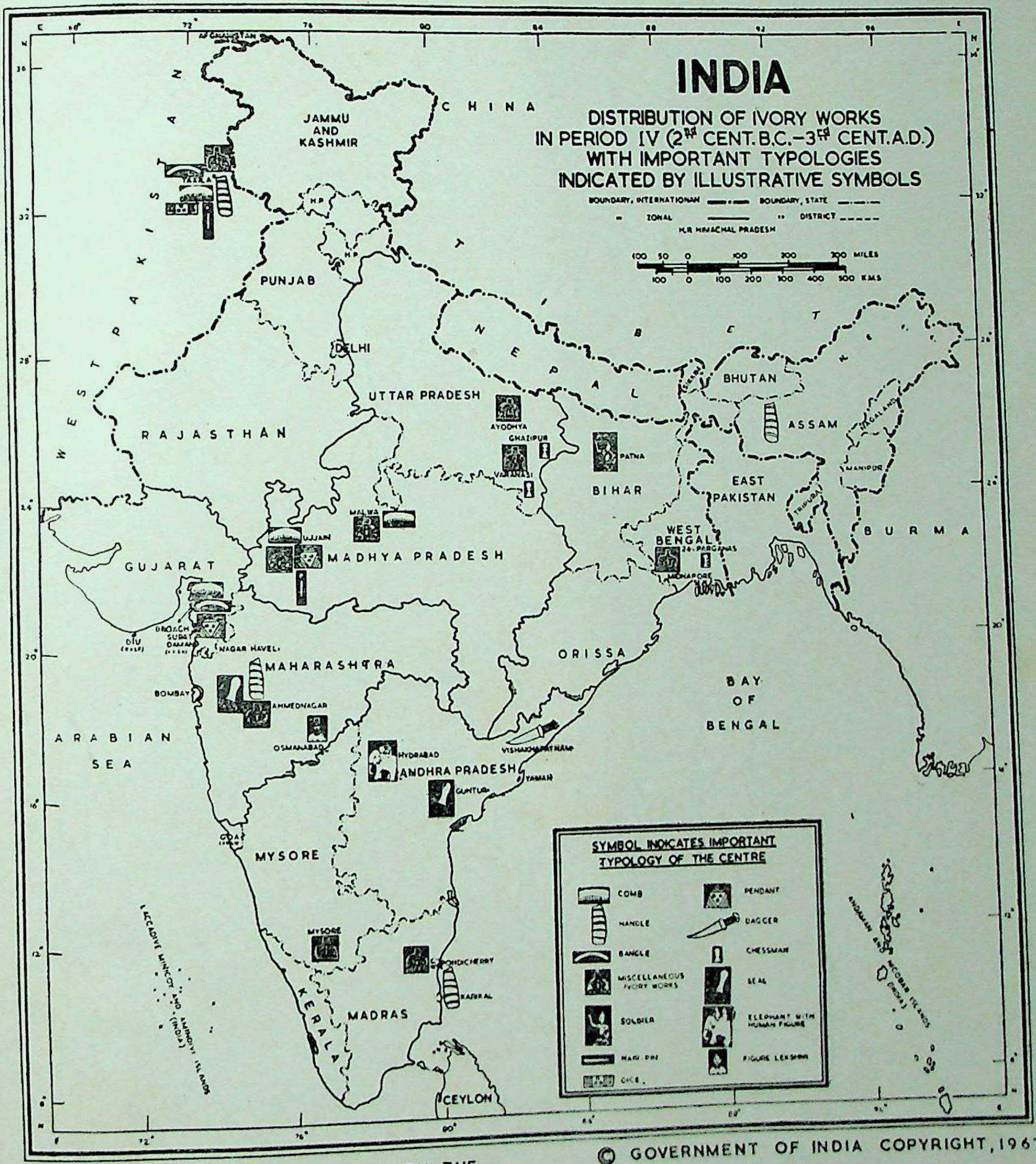
The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line


INDIA
DISTRIBUTION OF IVORY WORKS
IN PERIOD IV (2nd CENT. B.C.–3rd CENT. A.D.)
WITH IMPORTANT TYPOLOGIES
INDICATED BY ILLUSTRATIVE SYMBOLS
BOUNDARY, INTERNATIONAL
BOUNDARY, STATE
ZONAL
DISTRICT
H.P. HIMACHAL PRADESH
MILES
KMS
SYMBOL INDICATES IMPORTANT TYPOLOGY OF THE CENTRE
COMB
PENDANT
HANDLE
DAGGER
BANGLE
CHESSMAN
MISCELLANEOUS IVORY WORKS
SEAL
SOLDIER
ELEPHANT WITH HUMAN FIGURE
HAIR PIN
FIGURE LAKSHMI
DICE
CHINA
TIBET
NEPAL
BHUTAN
WEST PAKISTAN
EAST PAKISTAN
BURMA
CEYLON
JAMMU AND KASHMIR
PUNJAB
DELHI
RAJASTHAN
UTTAR PRADESH
AYODHYA
GHAZIPUR
VARANASI
PATNA
BIHAR
ASSAM
NAGALAND
MANIPUR
TRIPURA
WEST BENGAL
24-PARGANAS
MIDNAPORE
MALWA
UJJAIN
MADHYA PRADESH
GUJARAT
BROACH
SURAT
DAMAN
DIU
NAGAR HAVELI
MAHARASHTRA
BOMBAY
AHMEDNAGAR
OSMANABAD
ORISSA
VISHAKHAPATNAM
HYDRABAD
ANDHRA PRADESH
YANAM
GUNTUR
GOA
MYSORE
PONDICHERRY
KARIKAL
MADRAS
KERALA
ARABIAN SEA
BAY OF BENGAL
LACCADIVE MINICOY AND AMINDIVI ISLANDS (INDIA)
ANDAMAN AND NICOBAR ISLANDS (INDIA)

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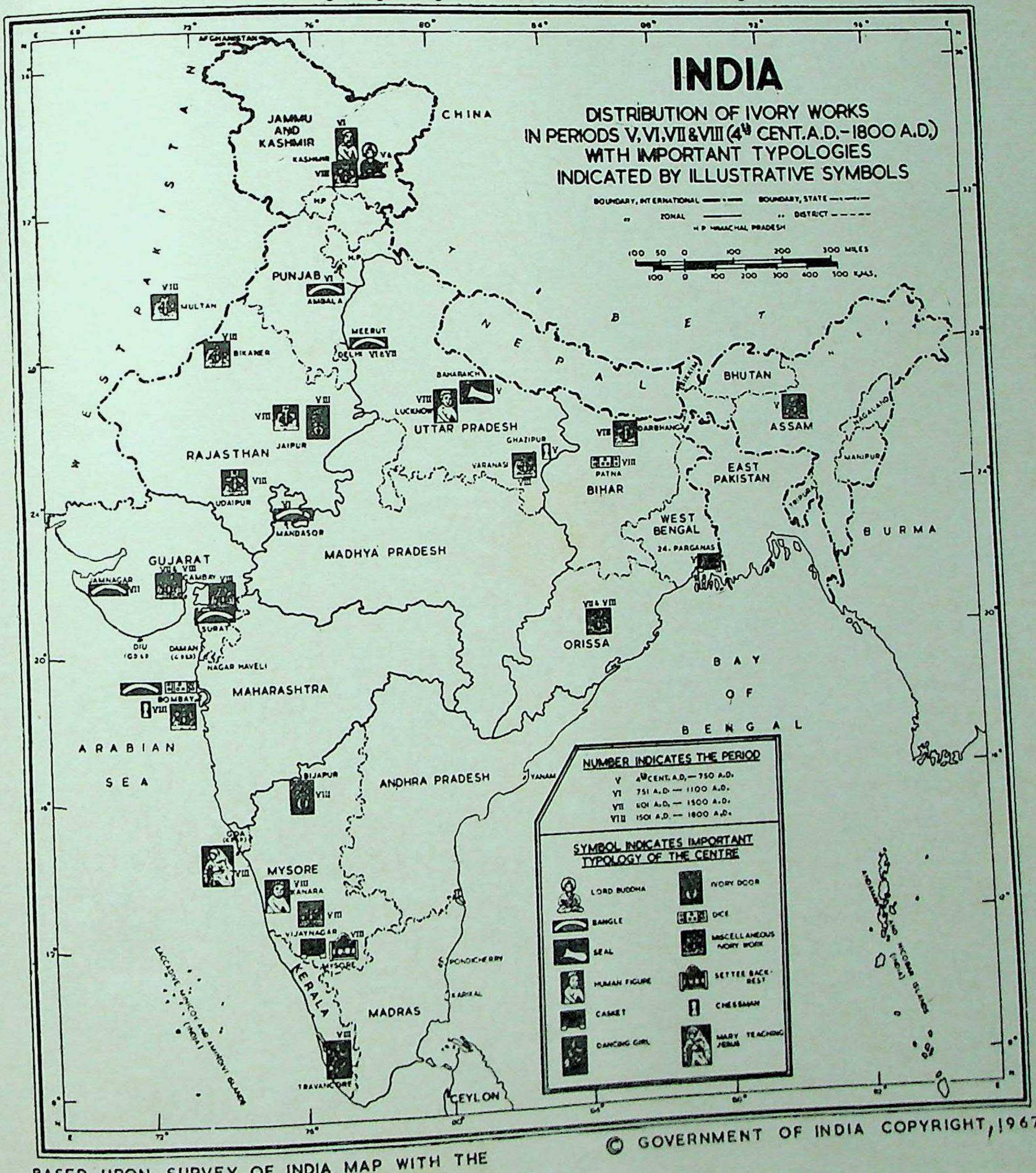
The territorial waters of India extend into the sea distance of twelve nautical miles measured from the appropriate base line



INDIA

DISTRIBUTION OF IVORY WORKS IN PERIODS V, VI, VII & VIII (4th CENT. A.D. - 1800 A.D.) WITH IMPORTANT TYPOLOGIES INDICATED BY ILLUSTRATIVE SYMBOLS

BOUNDARY, INTERNATIONAL
BOUNDARY, STATE
ZONAL
DISTRICT
H.P. HIMACHAL PRADESH
100 50 0 100 200 300 MILES
100 0 100 200 300 400 500 KMS.
NUMBER INDICATES THE PERIOD
V 4th CENT. A.D. — 750 A.D.
VI 751 A.D. — 1100 A.D.
VII 1101 A.D. — 1500 A.D.
VIII 1501 A.D. — 1800 A.D.
SYMBOL INDICATES IMPORTANT TYPOLOGY OF THE CENTRE
LORD BUDDHA
IVORY DOOR
BANGLE
DICE
SEAL
MISCELLANEOUS IVORY WORK
HUMAN FIGURE
SETTEE BACK-REST
CASKET
CHESSMAN
DANCING GIRL
MARY TEACHING JESUS
AFGHANISTAN
CHINA
WEST PAKISTAN
TIBET
NEPAL
BHUTAN
EAST PAKISTAN
BURMA
CEYLON
JAMMU AND KASHMIR
KASHMIR
H.P.
PUNJAB
AMBALA
MULTAN
BIKANER
MEERUT
DELHI VI & VII
BAHARAICH
LUCKNOW
UTTAR PRADESH
GHAZIPUR
VARANASI
DARBHANGA
PATNA
BIHAR
SIKKIM
ASSAM
NAGALAND
MANIPUR
TRIPURA
WEST BENGAL
24-PARGANAS
RAJASTHAN
JAIPUR
UDAIPUR
MANDASOR
MADHYA PRADESH
ORISSA
GUJARAT
JAMNAGAR
CAMBAY
SURAT
DIU
DAMAN
NAGAR HAVELI
BOMBAY
MAHARASHTRA
ARABIAN SEA
BAY OF BENGAL
BIJAPUR
ANDHRA PRADESH
YANAM
GOA
MYSORE
KANARA
VIJAYNAGAR
KERALA
MADRAS
PONDICHERRY
KARIKAL
TRAVANCORE
LACCADIVE, MINICOY AND AMINDIVI ISLANDS (INDIA)
ANDAMAN ISLANDS
NICOBAR ISLANDS (INDIA)
V
VI
VII
VIII
VII & VIII

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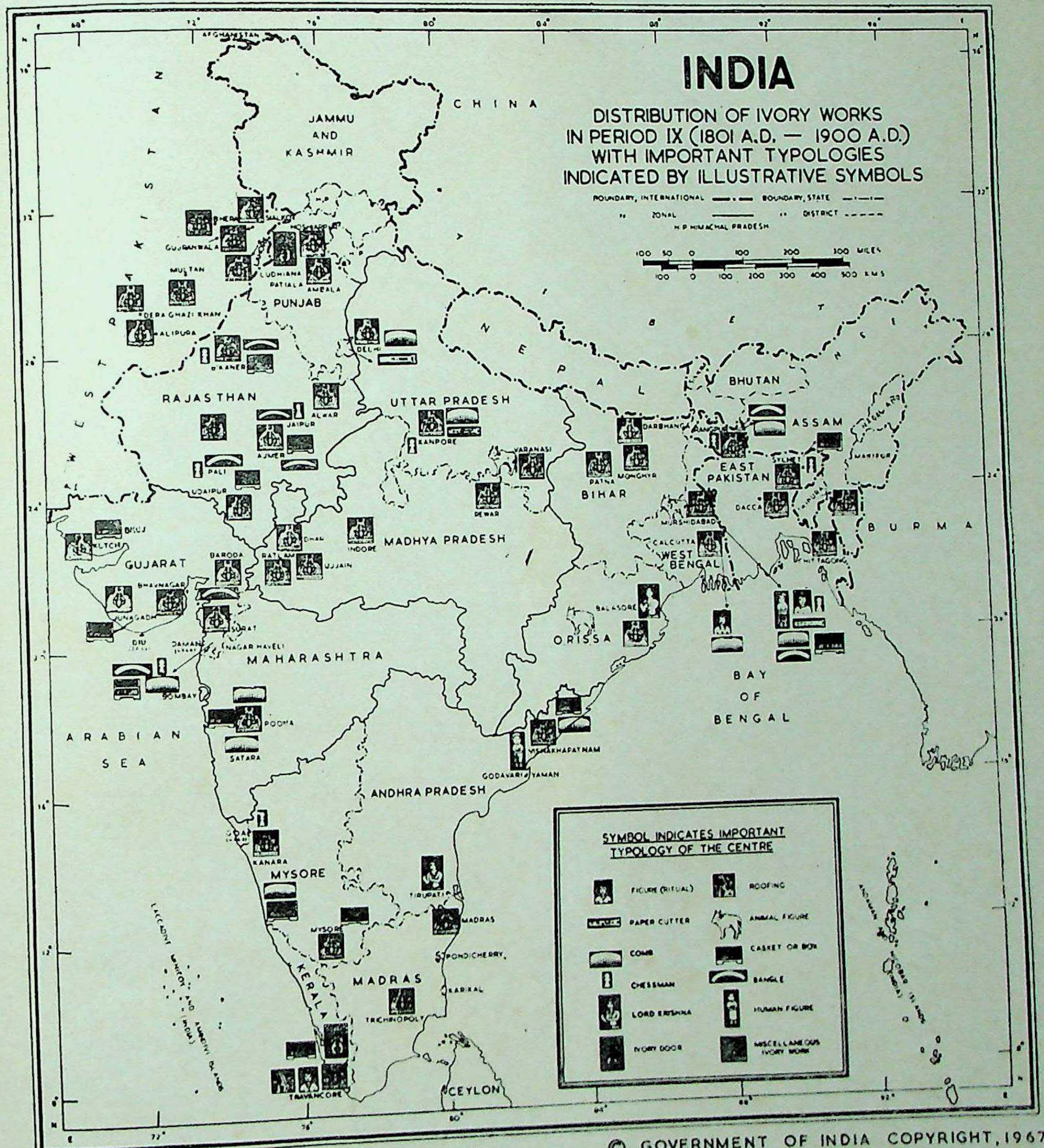
The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line



INDIA

DISTRIBUTION OF IVORY WORKS IN PERIOD IX (1801 A.D. — 1900 A.D.) WITH IMPORTANT TYPOLOGIES INDICATED BY ILLUSTRATIVE SYMBOLS

BOUNDARY, INTERNATIONAL
BOUNDARY, STATE
ZONAL
DISTRICT
H.P. HIMACHAL PRADESH
100 50 0 100 200 300 MILES
100 0 100 200 300 400 500 KMS
SYMBOL INDICATES IMPORTANT TYPOLOGY OF THE CENTRE
FIGURE (RITUAL)
ROOFING
PAPER CUTTER
ANIMAL FIGURE
COMB
CASKET OR BOX
CHESSMAN
BANGLE
LORD KRISHNA
HUMAN FIGURE
IVORY DOOR
MISCELLANEOUS IVORY WORK
AFGHANISTAN
CHINA
JAMMU AND KASHMIR
WEST PAKISTAN
TIBET
NEPAL
BHUTAN
ASSAM
EAST PAKISTAN
BURMA
PUNJAB
RAJASTHAN
UTTAR PRADESH
BIHAR
MADHYA PRADESH
GUJARAT
WEST BENGAL
ORISSA
MAHARASHTRA
ANDHRA PRADESH
MYSORE
KERALA
MADRAS
CEYLON
ARABIAN SEA
BAY OF BENGAL
LACCADIVE MINICOY AND AMINDIVI ISLANDS (INDIA)
ANDAMAN AND NICOBAR ISLANDS (INDIA)
GUJRANWALA
MULTAN
DERA GHAZI KHAN
BAHAWALPUR
HOSHIARPUR
LUDHIANA
PATIALA
AMBALA
DELHI
BIKANER
ALWAR
JAIPUR
AJMER
PALI
UDAIPUR
KANPUR
VARANASI
REWAR
DARBHANGA
PATNA
MONGHYR
SYLHET
DACCA
MURSHIDABAD
CALCUTTA
CHITTAGONG
MANIPUR
TRIPURA
BALASORE
BHUJ
KUTCH
BARODA
RATLAM
DHAR
INDORE
UJJAIN
BHAVNAGAR
JUNAGADH
DIU
DAMAN
SURAT
NAGAR HAVELI
BOMBAY
POONA
SATARA
VISAKHAPATNAM
GODAVARI
YANAM
GOA
KANARA
MYSORE
TIRUPATI
MADRAS
PONDICHERRY
KARIKAL
TRICHINOPOLY
TRAVANCORE

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